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ABSTRACT

This book of readings accompanies the "Handbook for Teachers of Reading in Adult Basic Education"; each part is meant to supplement each chapter in the handbook. Articles are grouped into the following categories: (1) an overview of adult literacy training; (2) social and psychological bases of adult basic education; (3) basic reading skills; (4) comprehension; (5) measurement of reading performance; (6) organizing for individual differences: methods and materials; (7) evaluation; and (8) materials. (For related document, see AC 012859.) (Author/KM)

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Readings

for

Teachers of Reading

in

Adult Basic Education

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David W. Knight and Lora R. Friedman
Reading Center, University of Southern Mississippi
in cooperation with
Dr. G. H. Johnston, Superintendent of Education
The Mississippi State Department of Education

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READINGS FOR TEACHERS OF READING

IN

ADULT BASIC EDUCATION

David W. Knight and Lora R. Friedman
Reading Center, University of Southern Mississippi
in cooperation with
Dr. G. H. Johnston, Superintendent of Education
Dr. Joe E. Holloway, Director of Division of Instruction
Joe Baddley, Supervisor of Adult Education
The Mississippi State Department of Education

1970

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This book of readings for teachers of reading in adult basic education accompanies the *Handbook for Teachers of Reading in Adult Basic Education.*

The organization of this book follows that of the Handbook, and each part here is meant to supplement each chapter in the Handbook. It is hoped that the readings presented will broaden the teacher's understandings of the background, philosophy, and practices utilized in an effective program.

David W. Knight
Lora R. Friedman

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PART I

AN OVERVIEW OF ADULT LITERACY TRAINING

THE ILLITERATE AMERICAN

One result of efforts to improve all levels and areas of education has been a surge of governmental and private action to wipe out illiteracy. More money and more leadership are needed to get the movement rolling in high gear; but once the groundwork has been laid, the brunt of responsibility for the day-to-day operation is likely to fall on public-school administrators and their staffs.

The illiterates receiving instruction today (less than 50,000 last year) are only a small fraction of the estimated 8.3 million Americans over 25 who are classified "functional illiterates" – persons who have not completed grade four. About 2.8 million of these have *no* ability to read or write.

These statistics compiled by the Office of Education from 1960 Bureau of the Census information, bring into focus one of the fundamental tasks confronting American education; how to teach illiterate adults how to read and write well enough to live in the complex twentieth century.

To many illiterates, learning to read and write is an important step to promotions or better jobs. For some, literacy is the answer to getting any kind of a job. For others, it means enjoyment of newspapers, books, and magazines and the very special and not unimportant satisfactions arising from being able to write their own names. Also important is the self respect and dignity it brings to people who once felt inferior and even humiliated because of their handicap.

Virtually all job-training programs, such as those set in motion by the federal Manpower Retraining Act, require that trainees be able to read and write. No longer can an apprentice learn to use the tools of a trade through oral instruction or watching another man work. Textbooks, parts catalogs, and assembly manuals are standard today for both training and day-to-day job activity.

Reprinted from *The Education Digest*, II (December 1962) 32-34, and *Overview*, III (now *American School and University*) (October 1962) 33-35, by permission of *The Education Digest*.

Today, the low-income, educationally deprived workers have the highest unemployment rates, receive the bulk of public welfare aid, and comprise a substantial percentage of those rejected for military service.

Who are these persons? Where do they live? What is being done about their plight?

Functional illiterates are concentrated in four main groups: (1) persons over 40 years of age; (2) persons living on farms, especially Negroes; (3) persons with rural backgrounds who have moved to urban centers; and (4) migrant farm workers and other disadvantaged groups. Every year, their illiteracy is exacting a stiff price in wasted talent, lost wages, stifled ambition, and even weakened national security.

A National Problem

Although the South has the highest percentage of functional illiterates on a state-by-state basis, the problem is national, not regional, with the largest concentration of illiterates in urban centers across the nation. For example, there are nearly 800,000 illiterates (many are Negro and Puerto Rican) living in the New York City area. Several other states having large numbers of functional illiterates are California, 505,000; Illinois, 365,000; and Pennsylvania, 453,000. Massachusetts, Indiana, Missouri, and Oklahoma each have more than 100,000.

Most literacy education is being carried out by public-school adult-education programs and by private groups and foundations. While there is little federal aid in this area as yet (beyond some pilot programs under the National Defense Education Act), a bill introduced in the last session of Congress would have provided $50 million over the next five years to combat illiteracy in America. The bill was designed to attack illiteracy through grants to:

Colleges and universities for teacher-training programs and for developing methods and materials for instructing illiterate adults.

States for financing pilot projects to show school districts how to use these materials and how to stimulate interest in literacy class attendance.

States for aiding school districts in the financing of literacy classes.

State boards of education to aid them in developing and improving literacy education programs.

The state grants were to be distributed in proportion to the number of adults within a state who lack a sixth-grade education, as compared to the total for the entire country.

Meanwhile, the literacy education programs now in operation are nowhere near sufficient—either in quantity or quality—to meet current demands.

According to a report from the U.S. Office of Education, "Of the 15,200 school systems studied, only 4,840 have reported any type of adult education program, and of these, only 160, or 3.3 percent, offer instruction in basic literacy education."

Several key areas where literacy education *has* gained a foothold are Memphis, Tenn.; Dallas, Tex.; New Orleans, La.; Philadelphia, Pa.; and northern Alabama.

In an 11-county area in northern Alabama there are approximately 105,000 functional illiterates, including 19,000 persons who have never been to school. Literacy education is being provided this area through use of the only state-operated educational television network in the country. This ambitious use of television for literacy education is being carried on with the aid of a $66,000 NDEA grant.

The Laubach (picture-word association) method of teaching reading and writing is used in a program of 98 lessons. The TV lessons are reinforced with group instruction by specially trained nonprofessional volunteer teachers.

Although only 600 persons signed up for the original course (which was launched in 1960-61 with considerable publicity), Miss Nell Peerson, director of the program, claims that thousands more watched the lectures on their own.

"We still are encountering a lot of difficulty getting illiterates to participate," Miss Peerson reports. "They don't want to lose face with their friends and employers, and many are afraid the lessons will be too difficult for them."

Although the Alabama program has not as yet effected a substantial reduction in the number of functional illiterates, it does represent a giant step forward. The second-year enrolment more than doubled (to 1300), with many new students declaring their interest was stimulated by watching some of the previous year's lectures.

Educational television is also being used for literacy education in Memphis (headquarters of the Foundation for World Literacy), in New Orleans, and in Philadelphia. In Dallas, the National Council of Jewish Women has developed a literacy training program for the 30,000 adults in the area who are unable to read or write. Chapter members have devoted thousands of hours to contacting students, providing teachers, and securing cooperation from schools and other public agencies.

The value of these programs can be best understood by the following letter received by a director of one of the literacy education programs from a student: "I always said that if I only had a chance I would really try my best to learn. Well, I've got that chance now, and I don't intend to let anything stand in my way if I can help it."

This student's enthusiasm is shared by many other American adults whose lives are being revitalized and redirected because they are, at last, learning to read an write.

GUIDELINES TO UNDERSTANDING ILLITERATE ADULT AMERICANS

Richard W. Cortright

A RECENT PROFILE of a typical teacher of adult illiterates in a metropolitan area showed that the typical teacher of adult illiterates was a married woman in her early forties with more than three years of college who usually worked in a community organization (1). Some of these teachers were home economists. For example, one home economist from Colorado who had been teaching in state university extension and had served as a county home agent taught three adult functional illiterates.

An adult functional illiterate is usually defined as an adult of 25 years or more with a sixth grade education or less. However, the functional illiterates whom this home economist taught might not be readily identified by years of school completion. One had finished high school and the others had eight and nine years of school behind them--far behind. The fact is that these adults (or adolescents) were members of that growing group who only stand and wait--the invisible dropouts.

If it is true that more than ten million adult Americans are adult illiterates in 1966, then more than five million are women. And what does that mean? Can they read a recipe? Can they follow sewing instructions? Can they read self-help articles in national women's magazines, or bulletins, or on hangtags? What does it mean for a woman to be functionally literate in homemaking skills?

No one has precisely answered the question, yet. Generally, educators have stated that the adult in contemporary America with push buttons, remote control, and split levels needs to be able to read the daily newspapers or other serial publications. But which publications? Extension bulletins? The *Journal of Home*

Reprinted from the *Journal of Home Economics*, 58 (April 1966) 253-255. With permission, Richard W. Cortright, Assistant Director, National Education Association.

Economics? The *Bible?* The *Torah? Look?* Fannie Farmer's cookbook?

Professional Definition of Homemaker Literacy Needed

I submit herewith the need for a professional definition of homemaker literacy. But in the meantime, certain guidelines are useful in trying to understand better the illiterate American and why the home economist has no choice but to help her.

If the principle of adult learning is for the adult to be fully engaged, and the main goal of adult learning is to develop adults who are "compassionately sensitive and tough-minded," then the experimental evidence of adult psychology should be very useful: the facts of adult learning that show adults can learn and that they can learn well what they need or want to learn.

The adult represents a sum-total of cognitive and affective skills significantly more advanced than those of the child. Adult psychology takes these facts and explains them to the adult educator or adult teacher so that the practitioner of adult education can take them into consideration when working with adults.

Since the adult can learn, then it is possible to modify the behavior of the adult through education. Whether this changes the nature of the adult is a philosophical question; that adults change through education is not questioned. Whether this is due to the "facts" of a "course," the modification of the "life-space" of the adult, or the attitudinal change of the adult is not so immediately important as the fact that something in the process of adult education does bring about change.

Age Relatively Minor Influence on Adult Education

Studies by Thorndike, Buhlen, and others show that age may be a relatively minor influence on adult learning. The older adult in proper circumstances can learn. But whether he learns by techniques acceptable to elementary education may be questionable. The adult learns by the careful organization of facts, by repetition and reinforcement, and by building upon previous experience. Knowledge cannot be poured unless something is there to hold the pouring, and that is the Gestalt of the adult's experiences.

The adult learns in a total situation. The physical setting is more important for him than for a child because his physical acuity may be impaired. Besides, the adult may not learn in a rigorous, logical fashion. Certain subjects may hold emotional ladings for the adult. The influence of dramatic presentations or role-playing may set the proper educational stage for his learning. Such total considerations are in the best sense intellectual.

There is need to strike a pleasant medium between the fact that learning is not necessarily easy, pleasant, or soothing with the fact that the rewards of adult learning make the learning worth while. Yet, the adult is not to be frightened away from learning because of unwarranted fears. Adult learning does not need to be unpleasant. How to be frank, yet considerate, is surely an area where adult psychology can aid the practitioner.

Adults have intelligence whether the individual adult has or has not been recently quantified to prove it. And it may very well be that individual adult intelligence is higher than that measured by tests. Adults have a pleasant habit of doing better, under proper learning conditions, than might be expected. Besides, whatever the intelligence level is, the adult can learn.

The psychology of adult learning points to the importance of understanding the person as an adult with a peculiar experimental organization and unique goals, and as a bundle of emotion and will. So understood, the adult learns.

Illiteracy is Everywhere

There is no county, no city, no village, hardly a wide spot in the road in America without illiterates. Take your state copy of the United States Bureau of the Census *General Social and Economic Characteristics of Population* and open it to table 115. There you will read the number of illiterates, most conservatively estimated, in your part of America. In addition, each state volume breaks down illiteracy by county.

Forget for a moment that "literacy has come of age" (2), that the Office of Economic Opportunity has been created, that

Literacy Councils are teaching illiterates, and that the Office of Manpower Automation and Technology has been established. What if the eradication of illiteracy depended on each home economist's working in the kitchen with the homemaker during the day, or after the evening dishes were washed? Well, it could still be done. For, fortunately, training techniques, adult reading methodologies, and technical information in easy-to-understand form have been developed and made available.

Functional Educational Materials

Let us begin with home economics educational materials, for without materials teaching is waves of sound only. And let us take useful materials: those materials which we tend to classify as functional. Whether in a paid position or as a volunteer, the home economist will need to have the tools to do the job of communicating useful information.

An example of functional materials in story form, starring Betty King, is a story about using detergents. Betty King learns answers to the following questions:

1. Will any detergent do?
2. What detergent is good for dishes?
3. What detergent is good for the wash?
4. What are low-sudsing detergents?
5. Which laundry detergent is cheapest?
6. What size box is the best buy? (3)

The story is presented with simple, clear-cut illustrations as part of a series on "You and Your Family" (3). In part, the story reads:

> One morning, Mrs. Adams called Betty King on the phone.
>
> "Hello, Betty," said Mrs. Adams. "I thought you would like to know that we are having another meeting with Mrs. Turner this evening. This time she is going to talk about detergents. She will have samples and tell which ones are

good for washing dishes, clothes, and all the rest. She might even have some money-saving ideas we could both use!"

Betty King thanked Mrs. Adams and promised to meet her at the door at 7:30.

When they walked into the recreation room, they saw 6 questions written on the blackboard. Here are (two of) the questions and the answers Mrs. Turner gave to the women at the meeting that evening.

1. Will any detergent do?

All detergents help you wash. But not all work well for every job. Some detergents help wash dishes. Other detergents do a better job of washing your family's clothes.

2. What detergent is good for dishes?

Most people prefer the liquid detergents made for dishwashing rather than the ones made for family laundry.

It's easy to recognize these detergents for dishwashing. Look at the labels for these words: Mild for dishes. Gentle.

Sometimes these detergents show pictures of dishes on the bottles.

In another broadside in this new series, the adult functional-illiterate (woman or man) is introduced to making a family spending plan–an idea which is stimulated by a family TV show. At the end of the story, a sample record form for "Where does the Youngs' money go?" is distributed and the reader is invited to fill it in with facts from his own family income. (4)

Home economists have become involved to the extent that they have prepared single-concept broadsides for new readers learning in Literacy Councils. This brief broadside on buying on time is one in a series prepared for urban Maryland (5):

> Have you bought something on time? How much did it cost? Perhaps the price was $59. Did your monthly payments add up to $59? Maybe you really paid more than $59. One woman's payments for a $59 table added up to $107. How

much did she really pay for the table?

Read the paper you sign *before* you buy on time. Know how to read to save money when you buy.

The teachers who will help adults to learn to read broadsides like these can be home economists since an integral function of the home economist in the emerging urban and rural areas is to enlist and train volunteer teachers. As adults learn to read, they will be fulfilling the main purpose of all literacy teaching: an easy and rapid transition to real literacy so "that (they) can read an ordinary newspaper with ease, or a book any ordinary person can understand." (6)

It is to this long-range goal that the home economist can contribute.

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LET'S PUT ADULT EDUCATION IN THE MAIN STREAM!

John B. Holden

Continuing education used to be merely a good and worthy thing for the individual, only that. But today, it is one of this nation's chief wealth-producing resources. For meeting challenges posed by our explosive growth of knowledge, for coping with increasing complexities in our society, and for adjusting to changing needs of each individual, continuing education as never before has become a vital force in the lives of every one of us.

Our world is changing at a staggering rate. Each scientific and technical breakthrough seems to produce a chain reaction of new knowledge, new opportunities, and new problems. Today we must learn more, in less time and throughout life to meet these challenges and in order to insure our security, our productivity, and our adaptability to ever-accelerating changing conditions.

Consider the awesome responsibilities that science and technology are creating for the citizens of a democracy. Only through continuing study can we discover how to make decisions about changes in the structure of government and all phases of life that are required if our democratic government is to survive and be the model for the litter of new nations recently born. It must be remembered we are talking about *unique problems of adults to be resolved by adults, not by children or by education of children but something distinct and different—a closeness between currency, urgency, education and action.*

Another need for lifelong learning is adjustment to change in individuals. At each stage in the life cycle, one feels the need for further learning because of discoveries for greater opportunities. Our urge to learn becomes more intense as we seek to qualify for promotions, and endeavor to contribute more to family and community life. A person who quits learning surrenders to an idea of limited usefulness, limited satisfaction, and limited happiness.

Reprinted from *Adult Leadership* 12 (September 1963) 66+. With permission of the Adult Education Association.

Thus, he has contributed to his own bewilderment and adds to a feeling of insecurity in a fast-moving world. The real purpose of continuing education is self-realization, self-fulfillment, and improvement in the quality of living. This requires a concern for good human relations, economic efficiency, effective family living, and civic responsibility. Lifelong learning can give us a feeling of significance, a sense of creativeness, intellectual curiosity, and knowledge of our purpose as a citizen in a free society.

The demand for adult education is on the increase, the number of people working in the field of adult education is growing, and the quality of our programs is high. I should like to present for your consideration several fairly recent developments that indicate we are on the move.

1. All segments of participation in Adult Education show increases. The Current Population Survey of 1957, the Gallup Poll of 1962, and the educational statistics collected by the Office of Education and the several associations point to this conclusion. The indicated increase has been from two to 20 percent annually during the last several years.
2. People participating in professional courses in Adult Education as well as in training programs for volunteer leaders have increased in number.
3. More pamphlets, books –– both clothbound and paperback––have been published, and more new Journals of Adult Education have appeared, and old ones have been improved, in the last ten years.
4. More national and international conferences pertaining to the role of Adult Education, needs, methods, and scope for Adult Education have been held.
5. An especially significant development in adult education has been a national conference and a publication on the role of adult education in the field of international development.
6. Finally it seems very important to me that adult education has been maturing through legislative enactment:
    a. The bipartisan Manpower Development and Training act was passed by Congress in 1962. It established a three-year, $345,000,000 program to retain the unemployed in new skills demanded by our complex industrial

society. A substantial part authorized allowances and expenses for the persons selected for retraining. The Act represents a large-scale effort by the Federal Government to meet some of the problems posed by automation, increased technology, and school dropouts.

b. Passage of the Education Television Act of Congress in 1962 points out the need for setting up the State Education Television Agency or Authority. The Act aurthorizes a program of matching Federal grants for the construction of television broadcasting facilities for educational purposes not to exceed $1,000,000 in any one state.

c. Four years ago, the U.S. Congress passed the Government Employees Training Act (Public Law 85-507) which authorized Federal agencies to spend money for continuing education of their employees. The law requires each agency to study its needs for training and also encourages inter-agency training and authorizes outside training when necessary. Each unit of the Federal government is encouraged to employ a Development Officer. Three years later we have thousands of Federal employees participating in this program. Millions of dollars are now being spent for such training. Perhaps all of this would not have occurred if Congress had failed to authorize it on a government-wide basis.

d. Seven years ago, Congress passed the Library Service Act. Each successive Congress has authorized a larger amount for communities of less than 10,000 population, and the current Congress is exploring the possibilities of extending this service to larger communities.

e. Hearings for other bills, such as the Basic Adult Education Act and General Extensions for State Universities, have been conducted and now have a beter chance of passage than ever before.

Even more important than the activities on a national and international scale have been the many new developments and the increasingly vigorous programs at local community and state levels. Space is not available for a complete listing of these activities. Actually, they are so numerous and so dynamic that no one person is or can be familiar with all of the significant developments in the last few years. Suffice to say that, notwithstanding the importance of national and international activities, the place where things really count, and where people really grow, is at the local community level. This does include state legislation, local rules and regulations, state appropriations, and local allocations for adult education as well as the tremendous part played by our numerous voluntary groups and by organized business and industry, labor and agriculture.

All of these developments are not just ideas or promises, but positive evidence that adult education is becoming more and more an integral part of our society. More and more people are feeling the need for continuing education, and they are looking upon continuous learning as one of the best methods of catching up, keeping up, and getting ahead.

We have been struggling along as an Adult Education Association for many years. At times we had no association, then at other times we had two major organizations in general adult education, plus several more specialized groups. Twelve years ago we decided to combine the two general groups, and more recently we have had the creation of new groups and the strengthening of older organizations. Some see this development as bad, others regard it as good. I prefer to take the optimistic view, and simply say, for a variety of reasons, that adult educators, and adult education associations, have never been as well off as they are today. In many ways, we are coming of age. The big jobs are ahead. We must find a way of breaking through rigid stubborn complacency.

Those of us who are interested in adult education, or are active in it as professionals, need to teach by example: We should continue our own education. There was a time when we thought research was a prerogative and responsibility of cloistered scholars or long-haired scientists. We must learn to become action-research minded. This does not imply that we should be oriented only to basic research, but it does mean that we should take a more serious look at where we are and where we want to be, and set up some method of gathering data on whether we are making progress toward these goals.

We need to get so excited about our programs that we even participate ourselves. Today, all of us can take a more serious look at what we are doing and how we are doing it, and establish a few bench marks and take time to evaluate. We must be sure that we have involved appropriate people in determining the goals. We must marshall all resources, and ask ourselves: How well have we done? What level of success have we attained? What contributed to our success? If we fail, why did we? And, most important of all, how can we improve?

We must: (1) Be willing to share our knowledge with others and to provide settings for these ideas to be tested and improved; (2) Struggle more to find better answers to problems that plague us as educators and citizens; (3) Create and maintain within ourselves attitudes of flexibility favorable to change; (4) Teach adults to learn how to learn more effectively. All this is not easy to do. It requires faith in oneself and in the future. Edgar Dale said that "Insecure people dread change They walk backwards into the future, clinging nostalgically, anxiously, and defensively to the past." As educated adults, we must not allow ourselves to become either negatively or emotionally immature in our outlook. We must keep on learning. To quote Edgar Dale further, "The flexibly educated man knows that today's fact may be tomorrow's fallacy." And Alfred North Whitehead said, "Knowledge does not keep any better than fish." Modern society does not live by asking, "Is everybody happy?" but rather, "Is everybody learning?" Continued learning is the basis for being richly alive. Sigmund Freud observed that "satisfaction does not come from the absence of frustration, but it comes from the process of relieving frustration. Not knowing is frustrating; learning is satisfying because it relieves frustration."

Now as adult educators, we need to find a new and better way of doing things. As an example, we in the Graduate School try to offer at least 30 new courses each year. Some may be new only in emphasis or in instructors, but at least we change the names of some courses, and go about promoting them with more vigor. For several years, we have offered a course in "Land and Water Policies" and it did not develop. Now we think we are going to combine forces and refer to "Natural Resource Development: Analysis and Policies," and we are going to cooperate with "Resources for the Future" and George Washington University in offering this current topic that is so important to all of us. A new title suggests action-oriented education rather than a static and passive program. A new course is designed to look to the future. There is no room for the apologetic or the "can't be done" attitude. Rather, we are now living at a time when it is just a question of who's going to do it, and when; not, whether it can be done.

DEVELOPING A TOTAL READING PROGRAM FOR ADULTS

James Schiavone

NUMEROUS ESSENTIALS ARE TO BE CONSIDERED in the development of a total reading program for adults. By a total reading program is meant a program of reading instruction for beginners, right on through the advanced higher-level skills of superior readers.

Many adult reading instructors, particularly in low-population areas, are often faced with the problem of a classroom of adult students with reading skills at varying levels. All of these adults are eager to begin learning to read, or to improve present skills and develop new ones. It is not the purpose of this article to encompass the problem inherent in a group of multi-level readers, each requiring special instruction. Rather, we are concerned with the development of a program consisting of groups placed according to grade level. This may seem complicated at first, but close examination will indicate that this is far more effective and easier to handle than the "one-room schoolhouse approach" with which many adult educators are faced.

A grade-level approach is not a gigantic, formidable task. In the long run it will serve more adults and offer a wide scope of reading instruction. This approach will serve to eliminate situations whereby a "reading improvement" program is established for adults with a wide variety of backgrounds, needs, and interests. When such a group is brought together, the instructor learns that Mrs. Jones can barely read the newspapers, and that Mr. Smith is an executive seeking to increase his efficiency in reading for business purposes and in keeping abreast of current events. With an expanded adult reading program, the needs of both Mrs. Jones and Mr. Smith can be adequately met, in separate groups.

First and foremost is the recognition of the need for an ex-

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panded total reading program. In areas where an adult education program is reasonably well established, a total reading program is generally called for. In smaller areas, the need is recognized through requests for reading instruction from non-readers to college graduates. However, larger, well-established adult education programs can and should have a total reading program.

Organizing The Program

A total program requires a chairman or co-ordinator for proper administration. The chairman could also assume teaching duties.

Through the co-ordinator, an interviewing and testing program is established. In some adult centers, the guidance department handles the testing needs for the entire school. Experience indicates that the reading instructors are probably best equipped to handle the interviews and tests. The following procedure may seem cumbersome but it works quite well: All adults interested in enrolling for a reading course are informed of the various dates for the reading tests. In large adult programs, testing sessions are arranged on a regular basis, and eventually a waiting list could develop. Prospective students are asked to arrive an hour before testing time. Each student is interviewed by a reading instructor to determine the test he will take. The interview is very revealing. Students with foreign language backgrounds and little or no schooling are given a lower-level test such as the Metropolitan Reading Test. The intermediate groups, those who have completed elementary or junior high school, will probably be scheduled for a test such as the Gates Reading Survey Grades 3 to 10. The high school and college students and graduates, may be given a test such as the Nelson-Denny Revised Test for High School and College.

With the results of three types of reading tests, the co-ordinator is able to schedule students into classes where they will make the most gains. The results of the tests are interpreted for the student at the time he is scheduled in a suitable class. These results are also utilized by the instructor in preparing his lessons and in working with his students.

If a total reading program is to develop, sound testing procedures are essential. Too often, the adult counselors do not know which reading test an applicant should take. If the tests are to be administered through the guidance department, then the counselors will require a briefing regarding the types of tests available and the purpose of utilizing each test. It should be noted that both the Metropolitan and the Gates are designed for children. However, since a lower level reading test for adults does not exist, these tests must suffice.

The Total Program

When the test results are obtained, the student is scheduled for a class. A total program does not imply separate classes for Grades 1-16. Instead, the groups may be broken down into the following structure:

Grades 1-3
Grades 4-6
Grades 7-9
Grades 10-12

This structure is suggested for a smooth and efficient administration of the program. Local needs may dictate other arrangements.

At this point, we have within the adult education facilities a total reading program. Under this set-up, the community is ready to offer reading instruction for all adults at any level. The non-reader and the adult with a very limited reading ability are able to receive training, as are the adult high school student and the business and professional people seeking to sharpen their skills at the higher levels. This then, is a total reading program for adults.

Structure of the Total Program

A. Elementary Grade Levels 1-6

This program should be offered for non-readers who wish to begin the study of reading, as well as for those who have already developed some proficiency in reading. The course could be broken into classes of grades 1-3, and 4-6. The instructor then has a basis for grouping within the class, and can instruct accordingly. As a student improves and demonstrates a readiness for the higher levels, he may be transferred to the next highest class. He need not wait for the next semester. In this manner, a certain amount of flexibility provides for an individualized approach. The student can improve at his own rate and is not held back. This procedure works well in practice and does not tend to overload one class, as students are continuously progressing. Some adults who are working toward a high-school diploma are most eager to develop their reading skills quickly in order to handle the high school courses. The motivation here is strong, and it is not unusual for a student to make a gain of one or two years in just a few short months.

The program at this level should emphasize all of the skills and techniques necessary for the mastery of reading in Grades One through Six. In a typical program, the student at the first-year level is taken through the beginning stages in the growth of reading skills. He has experiences in both oral and silent reading. As he begins his study of words, he is given exercises in auditory perception and discrimination. This is followed with work in visual perception and discrimination. As the student develops proficiency in these areas, he progresses through the development of word meanings. Carefully planned lessons in word analysis are presented. Through the use of graded materials, the student grows in his ability to read.

In the intermediate-grade levels (4-6), the student is provided with experiences in the progressively higher reading skills. The various reading skills at each level are actually interrelated; their modifications are continuous as the student moves through the various grade levels. One reading pattern merges into another as the student progresses. Continuous progress is also experienced on vocabulary, comprehension, and rate. More of the same type of practice at a higher level is experienced in the intermediate group of the total reading program. As the need arises, students should be taught the more advanced skills of reference reading, critical reading, and appreciation of literature.

B. Secondary Levels 7-12

The secondary level of the adult reading program must be designed to help students to develop the skills and techniques necessary for the mastery of reading in Grades Seven through Twelve. The general objectives at this level encompass a wide range of reading material with emphasis on comprehension, vocabulary development, and rate. Training should be given in grasping literal and broad meanings; recognizing the author's purpose and intent; evaluating what is read; identifying topic sentences, main ideas, and supporting details; and critical reading.

When a student demonstrates his competence and ability in efficient reading at the secondary level, he may be placed in the advanced developmental reading program.

C. Advanced Developmental Reading

This course is designed for the average or better-than-average reader who wishes to sharpen his reading skills. All of the higher level reading skills are emphasized. The general objective of the course should be to help every student to achieve his reading potential.

The specific objectives of developmental reading were prepared under the chairmanship of Dr. William S. Gray of the National Society for the Study of Education. It would be well to consider the application of these objectives in connection with a developmental reading course for adults:

1. To develop the ability to comprehend the literal meaning of what is read.

This objective should constitute the major portion of the course. It is necessary to utilize special exercises in reading for main idea, outlining, and summarizing. Additional work should be given in comprehension and understanding the implied meanings of words. A continuous program of practice should be employed to insure proper development of these essential skills

2. To develop the ability to read materials of varying levels of difficulty and at the most efficient rate.

Reading rate varies with the reader's purpose and the type of material he is reading. One would not expect to read a technical report at the same rate as a novel. Once the reader's purpose is established, he may read a passage or an article very thoroughly or he may skim rapidly. The principal text or workbook for the course should offer a wide range of materials and levels of difficulty.

3. To devlop the ability to secure the broader meaning inherent in a passage.

In meeting this objective, materials should be presented to give the student practice in getting the broader meanings of a passage. This includes identifying the author's intent or purpose and his tone and attitude. Practice exercises should enable students to understand how attitudes are expressed.

4. To develop ability to judge the relevancy, accuracy, or importance of the author's statements, the logic of his presentation, or the validity of his conclusions in the light of the author's purpose.

The materials of the course, in combination with methods of reasoning, principles of rhetoric, and criteria for judging evidence, will enable students to apply this knowledge. The following specific skills should be developed:

1. Speed of perception and reading rate.
2. Vocabulary development.
3. Dictionary usage.
4. Increased comprehension.
5. Intensive reading.

6. Thorough reading.
7. Study type of reading.
8. Understanding of broader meanings.
9. Evaluation of writing.
10. Skimming and scanning.
11. Reading in subject areas.
12. Reading technical and complex materials.

A total adult reading program, offering instruction and practice in the development of reading skills, is both feasible and practical. It is the most efficient way of teaching reading to adults, regardless of the level of skills they possess when they enter the program. Through proper testing and overall administration, a complete and academically sound program can serve to meet the needs of all adults in a growing American population.

LITERACY THROUGH TELEVISION

R. A. Luke

National concern over the problem of adult illiteracy has never been greater than it is today. The reasons for this are clear and sharp.

First, because of increasing mechanization and automation of industry, it is necessary to find new jobs for jobs which no longer exist. We are in a never-ending race between the number of jobs disappearing every day and the need to find new jobs for displaced workers. It is estimated that there are approximately 2 million jobs being eliminated annually because of automated industrial processes.

Second, it is necessary to provide training and retraining programs at various levels of technical complexity for individuals who already possess a sufficient basic educational background to enable them to move into the new kinds of positions evolving as a result of automated processes.

Third, there is the unpleasant but undeniable fact that millions of individuals in the United States have a severe educational deficiency. The 1960 National Census indicates the magnitude of this problem: At the time of the enumeration, there were 10 million "functional illiterates" [1] (individuals who had not completed five years of school), 23 million adults over 25 years of age who had not completed eight years of formal schooling, and 55 million adults who had not graduated from secondary school.

During the past year, literacy education––or adult basic education, as it is more commonly called––was given a great boost by placing in operation the provisions of Title II-A of the Economic Opportunity Act. This section of the war on poverty legislation made funds available to state departments of education for use by local school systems in getting additional programs of adult basic education under way. These new classes were in addition to the

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thousands of adult basic education classes already being held--though not generally throughout the United States--under the sponsorship of local boards of education.

While most of these funds are being used to support classroom programs of adult basic eduation, either in school buildings or in convenient neighborhood facilities, there is no restriction against using the funds for televised programs of instruction. Such programs are under way in a number of communities.

The use of television in the area of literacy education is readily understood by many directors of adult education throughout the United States. This understanding is attributable largely to the fact that two successful televised series of instructional programs for adults have had wide visibility on kinescope or videotape in many communities.

The first of these programs was made in 1957 by the Laubach Foundation when it produced a series of films transposing for television the well-known principles of Mr. Laubach's *Streamlined English.* Kinescopes of the films were widely shown. Perhaps better known, however--both because it was produced later and had the advantage of more advanced routing techniques--was *Operation Alphabet,* a television literacy series developed by the Philadelphia, Pennsylvania, Public Schools and later distributed nationally by the National Association for Public School Adult Education. This program succeeded not only because it was technically effective but also because financial resources were made available to record it on videotape and route the series without charge to communities, large and small, throughout the United States.

Other local communities and local public school systems, however, also have worked jointly with commercial television to produce literacy programs. Among those which may be cited are a program undertaken by the Lark Foundation in Seattle, Washington; a program sponsored cooperatively by the St. Louis, Missouri, Public Schools and the commercial television station in Kansas City, Missouri; and a similar program in Baltimore, Maryland.

Developed by the Philadelphia Public Schools, School Extension Division, in conjunction with Philadelphia's television station, WFIL, *Operation Alphabet* is composed of 100 half-hour television programs. Grants from the Annenberg School of Communications (University of Pennsylvania) and the Minnesota Mining and Manufacturing Company made it possible to tape the program and offer it free to other television stations. Accompanying the 20-week series is a home-study book containing 100 lessons based on the television program. The book reinforces and supplements what the learner sees and hears on his television screen.

Operation Alphabet is designed to help the functional illiterate learn both basic reading and writing skills. For four days each week, a few new words are introduced for sight recognition, and one script letter is brought into learning-to-write part of the lesson. The fifth day (usually a Friday) is devoted to review work. If he follows each lesson carefully, the conscientious learner will reach––or nearly reach–– a third-grade reading and writing level by the time he completes the series. It is at this point, then, that efforts need to be made locally to get him enrolled in a formal educational environment so that he can progress to the eighth grade of literacy competency and beyond.

Estimates as to the effectiveness of televised instruction vary widely. In Philadelphia, enrollment in elementary adult education classes in public schools are reported to have increased by 25 percent after the first showing of the series. In Cincinnati, Ohio, enrollments rose 21 percent. Kansas City, Missouri, in common with Philadelphia and Cincinnati, carried out intensive promotional campaigns for the series, and audience surveys in Kansas indicated that *Operation Alphabet* reached 8,000 of the city's estimated 25,000 illiterates.

Altogether, about 100 cities––including nearly all of the largest in the United States––have shown *Operation Alphabet,* and some have scheduled second and third showings. The Philadelphia Public Schools' Extension Division is telecasting a second series beginning where the first ends. The initial presentation is not being placed on videotape, but it is hoped that this will be possible when the series is repeated. This new series is intended to elevate the illiterate to the sixth-grade level without, however, replacing formal instruction under the guidance of a trained teacher. Its primary aim is to supplement and stimulate regular classroom work.

The success story of Philadelphia, Cincinnati, and Kansas City has been reported by many other communities. On the other hand, many cases exist wherein *Operation Alphabet* was shown by television stations without reaching a single illiterate or, at the very best, a mere handful. The key to the success or failure of the entire project rests with the effectiveness of the promotional campaign devised to accompany the program in different communities.

Only two systematic research studies have been made on televised literacy programs. In 1959, a $66,000 National Defense Education Act grant was awarded to Alabama to assist in the televising of the Laubach series over the state-operated ETV network to provide literacy education for an 11-county area of northern Alabama. Six hundred individuals registered for the first course, but it was estimated that many thousands more watched privately.

Under a Cooperative Research Grant, Nell Peerson studied the Alabama campaign. She found that her adult subjects read considerably less well, on the average, than a typical second-grade child in the Alabama schools. Those adults who completed the program, however, seemed to have made more progress than did the Alabama second-graders during the same period of time. The adults were reading at the mid-second-grade level. Miss Peerson also found that a high percentage of the students continued in classes during the summer and anticipated participation in a second course.

Operation Alphabet was used in a state-wide campaign in Florida, and a comprehensive study of the program was made by Marianna Bunger at Florida State University. Mr. Bunger found that teachers, administrators, and students were pleased with the telecasts themselves; they were highly complimentary toward the teacher and the teaching techniques he used. Criticism was voiced, however, in terms of the time the programs were scheduled (often early morning) and the speed with which the lessons progressed.

The study seemed to indicate that the students who studied in groups with a volunteer teacher made no more progress than those who studied individually at home. Furthermore, the use of the home-study guide did not apeear to make any difference in the reading improvement of *Operation Alphabet* students, nor did the *Operation Alphabet* telecast seem to affect the enrollment of public school adult literacy and elementary education classes.

Thus, it is obvious that educational television is not a cure-all for the problem of illiteracy. However, in spite of conflicting evidence, it seems very apparent that while *Operation Alphabet* may not be a general cure for the problem of illiteracy, if there is a well-supported, centralized effort to elicit an adequate response from those who need the program, much progress can be made.

When educational authorities who used *Operation Alphabet* in all parts of the country were asked for their comments and criticisms, they agreed that the greatest single problem initially encountered in trying to eliminate functional illiteracy is not the absence of teaching tools––limited though these may be––but that of motivating the individual to take advantage of the opportunities available to him. Many adults feel that they are too old to learn, and others are satisfied with their jobs or life situations and see no reason to change them. Still others have so long abstained from any systematic attempt to learn that the mere idea of studying––even in the privacy of their homes via television––is too much for them. To the man who does heavy manual labor, holding a pencil at TV lesson time can be a discouraging undertaking.

It has been difficult to measure the full impact of the series mainly because funds have not been available for research to determine how many persons view the program and how far their reading levels advance as a result of regular viewing.

In many respects, the problems of and opportunities for using television in literacy education in the United States are not unlike those encountered around the globe in the great world-wide struggle against illiteracy. I. Keith Tyler of Ohio State University, writing in the Fall 1965 issue of *Audiovisual Communication Review* (p. 324), concluded his article with a statement which is equally useful in concluding this description of the use of television as an instrument in the reduction of illiteracy in the United States. Mr. Tyler said:

Experience indicates that effective employment of this instrument requires close and dedicated co-operation between the experienced literacy educators in close contact with classes in the field and the television specialists who know the television medium. But the articulation of the broadcasts with student text-workbooks and particularly with self-instructional materials still awaits development and appraisal. The promise is great.

FOOTNOTES

[1] Illiteracy in the United States is not found in any one group or geographical location. Of the 10 million illiterates, roughly 4 million are native whites, 3 million are foreign-born whites, and 3 million are negroes. While a larger percentage of illiterates are over 45 years of age, each year thousands of new adolescents continue to add their numbers to the total.

CONSIDERATIONS IN CONSTRUCTING A BASIC READING PROGRAM FOR FUNCTIONALLY ILLITERATE ADULTS

Esther Fox

Who Are the Functionally Illiterate?

The illiterate adult in American society is that individual who does not have the necessary reading skills to make him eligible for vocational training when his marginal job in the labor market is discontinued. His lack of reading skills serves to make and to keep him unemployable. His functional reading may be on a number of levels, varying from preprimer to that of the word-by-word reader who does not comprehend what he reads. He may well be of that 25% of the population which is trainable but below average in intelligence.

Or he may be of average intelligence but of that unfortunate group of individuals who have been educationally deprived. Many adults in the Appalachians have suffered from lack of transportation to out-of-the-way schools where compulsory school laws were ignored and where the one-or-two-teacher schools were, and too often still are, staffed by teachers who have high school diplomas or little more.

The Purpose of a Reading Program For the Illiterate Adult

The purpose of a reading program for the illiterate or educationally handicapped adult is to develop independent reading skills. This adult needs, first of all, to become employable or eligible for more than a marginal laborer's job. If he has no job, he may need training in a type of work which may be presently available. Automation has resulted in the elimination of many types of simple laboring jobs. New types of work demand skilled labor which must be trained.

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It is desirable that guidance in a reading program should also result in the opening of a whole new world of informational and recreational reading for these individuals. The use of such materials as the Reader's Digest Skill Builders[1], if continued through the various levels, should result in an interest in reading current magazines and newspapers.

It is not the purpose of this type reading program to take the place of those improvements in reading courses which are presently available in many adult education programs. These are primarily to increase the speed of reading for all adults and to increase the reading skills of poor readers.

How to Find the Illiterate Adult

The adult who cannot read is most reluctant to acknowledge his deficiency. Often he will go to any length to hide it. A common practice of workers who cannot read is the tearing off of corners of cartons and papers for purposes of identification. Poor eyesight and the lack of glasses are often used as excuses to get others to read directions aloud. Care must be given in identifying this type of individual and much contact is needed in persuading him to attend a basic reading class. Surveys of the type which are commonly employed to obtain information are useless when used to locate the educationally handicapped.

An estimate of the number of illiterates in a community should come from a number of sources. Welfare agencies, state employment agencies, and county agents should all be contacted for their estimates of the extensiveness of this need. Public school principals, with the direction of their boards of education and through their knowledge of the families of their children, should be able to give added information. Personnel managers in small factories and distributing plants should be contacted and their information added to the former. In small communities much information conversation with residents. Churches serving this group in our population should not be neglected in a survey of this nature.

At best the results of such a survey can be only an estimate. But it must be made and the need based upon its extensiveness before a meaningful program can be instigated.

Ways of Administering a Reading Program

Such a program of reading instruction should start with a policy-making group which will also administer the program. Representatives of various cooperating groups with specialists in advisory capacities should make up the board of directors. Several community groups or agencies, such as interested civic and service clubs, welfare agencies, county agents, management in small industries, public school systems, and community colleges might cooperatively sponsor such an endeavor.

Any one of these groups could provide equipment and building space for the program. Community buildings, abandoned rural schools, public schools, or space in nearby churches might be utilized. Some groups might even meet in homes.

A reading program for marginal persons would necessarily have to be financed largely by such agencies as welfare departments, civic and service groups, college extension services, state boards of education, adult education groups, etc. Whereever possible the learners should carry part of the expense. A small fee might prove preferable to paying for expendable materials since scholarships can be more easily provided for those who are not employed. A financial investment in one's own learning often provides additional motivation.

A referral to the reading groups made by some agency or a preliminary interview by a qualified person might well eliminate those who would be classified as not trainable. State employment agencies, welfare agencies, and employers would have some idea of an individual's ability to profit from instructions.

Diagnostic and Progress Testing

Testing should, where possible, be carried on in such a manner as to seem part of the program itself. Informal testing procedures are the easiest to handle in this way. Most adults would respond with interest to tests of lateral dominance using the V-shaped cone[2] and to the sample tachistoscope[3] for quick work and phrase recognition testing. The latter could be used for testing as well as for a training aid.

Tests of letter sounds and names would have to be a reasonable place to start. Phonovisual consonant and vowel charts, Lyons and Carnahan's complete word recognition program, and Dolch basic sight cards might all be profitably used in testing and later in teaching (see Appendix). Individual charts and word-recognition books should be provided for home use.

Harris' method of quick comprehension[4] with all the group members reading orally two or three sentences of a selection and answering related questions could well be used to find those who are word-by-word readers and who need guidance primarily in the ability to read with meaning.

After the reading program has been in progress for some time, testing of a more formal nature can be gradually introduced. It is important that the learner approach the test as a means of determining how well he is reading and what further help he needs. Where progress is good, much should be made of it. In most instances it would seem unwise to point out to an adult that he is now reading on a third grade level, but when care is taken to mention an increase of two reading levels, pride in accomplishment should result in increased motivation.

Since no cumulative records will be available to the teacher of adults, mental maturity tests and standardized reading tests may have to be given at this time. Where the reading program is sponsored entirely or jointly by vocational guidance clinics or welfare agencies, specialists will be available to administer and evaluate these tests. In some programs, this might precede the beginning of the reading instruction. The Wechsler Adult Intelligence Scale would perhaps be the best individual intelligence test for these educationally handicapped adults.[5] Gilmore Oral-Silent Reading Tests and Durrell Tests Batteries are recommended for both children and adults.[6]

In later testing by the teacher, Harris' oral reading lists could be used. These tests progress from simple teacher-kept check lists to one of general reading performance to a more complete test which aids in analyzing specific errors in word attack, fluency, use of voice, and postural habits.[7]

Teaching Techniques and Procedures

The standarized technique as developed by Mills[8], with time variations as individual needs differ, would make as fine an approach in this type of reading program as in the usual remedial one. This technique involves four methods: The visual, phonic, kinesthetic, and combinations.

Most of the adults will be non-readers. For this reason the sight method should be employed largely at first. The visual-motor method makes use of three to five cards, each with a word which is unknown to the reader. The teacher pronounces the words, one by one, several times. The learner repeats the word, closes his eyes and visualizes it, repeats it again. After the word is removed, the reader is asked to write it. Then he covers the word, if correct, and writes it again. When he is able to do this, he passes to the next word. If not, he repeats the procedure until he can. If words prove too difficult simpler ones should be used.

Alone with the sight or sight-motor method, the adult should be able to profit from a phonetic approach which is begun at the same or nearly the same time. Four to five sounds should be introduced at a time. Vowel and consonant charts and picture-word cards can be used for teaching and later for home study. The teaching of beginning word sounds, ending and middle sounds, and blends follows at once. Then as soon as possible the teaching of word families, prefixes, suffixes, and root words should be added.

Since the illiterate adult can neither read nor write, it seems likely that the kinesthetic method will serve to increase his progress in both. Since this same adult is given more to manual pursuits than to academic ones, this method may have real appeal to him.

The teacher writes a word in large cursive writing with letters of about two inches in height. The reader traces the word with his index finger saying each part as he traces it. When he is able to do so, he writes the word without looking at it. If he makes an error or cannot finish a word, he retraces it as a whole. No erasures are permitted. The process is repeated until he seems certain of the word.

Since these learners are adults and most if not all will have had a background of at least three years of schooling, they should be able to move rapidly into a program which includes some time each seesion for practice in the different methods of word attack, some time for attention to phonics, and some to actual reading. Experience charts could well be used to make up for a lack of simple reading material of adult interest. As soon as possible the Reader's Digest Skill Builders or like materials can be introduced as readers.

Suitable Materials

Materials for teaching basic reading skills to adults are almost non-existent. Care should be taken in selecting available materials to use only those with adult-appeal. The materials listed in Appendix I, with their current prices, should be used as possible suggestions only. However, an effort was made to include in this list all the types of material needed for a beginning program. Games which learners can play with their school-age children should make an attractive addition to any program.

Record Keeping

Case records are an essential to insure a reading program which is well-balanced and suited to individual's needs. Individual records, kept in separate folders, should contain:

1. Results of individual intelligence and reading tests, when given;
2. A profile depicting the individual's reading level and reading expectancy;
3. Records of specific reading difficulties and progress based upon the results of tests as given (also included in the folder);
4. The teacher's outline of a reading instruction program especially designed for this individual;
5. Background information concerning his physical condition, employment record, school history, family, personality, hobbies and interests, and recommendations.

APPENDIX I

A suggested listing of materials for a basic reading program for adults:

For the teacher:

Dolch Supplemental Teaching Aids. Garrard Publishing Co., Champaign, Ill.

1. Help the Educationally Handicapped	$ .50
2. A complete set of five teacher-help booklets	2.00
3. Teacher editions to the phonic materials and readers listed below.	
4. Various texts as listed in the references	

Sight Materials:

Dolch (see publisher listed above)

1. Picture word cards (95 commonest nouns)	$1.00
2. Basic sight cards (basic vocabulary of 220 words)	1.10
3. Sight phrase cards (140 cards)	1.00

Phonics Materials:

Phonovisual Products, Inc., Box 5625, Washington, 16, D. C.

1. Remedial or individual unit (method book, consonant and vowel charts)	$4.25
2. Phonovisual consonant workbook (See, Hear, Say, Do)	.60
3. Phonovisual vowel workbook (Sound, Spell, Read)	.60
4. Phonovisual diagnostic test (with directions for individual score sheets for identifying phonetic weaknesses)	.10

Lyons and Carnahan, 2500 Prairie Ave., Chicago 16, Ill.

1. Phonics We Use: Books A, B, C, D, E, F	a set	$3.64
2. Teachers' Editions of the same	a set	3.64

Readers:

Reader's Digest Services, Inc., Educational Division, Pleasantville, N. Y.

1. Reader's Digest Reading Skill Builders (Grades or levels 2, 3, 4 unmarked 3 in each group @ .60	$5.40
2. Teachers Editions, same price	5.40

FOOTNOTES

[1] Reader's Digest Skill Builders, Educational Division, Reader's Digest Services, Inc., Pleasantville, N.Y.

[2] Bond, Guy L. and Miles A. Tinker, *Reading Difficulties, Their Diagnosis and Correction,* New York, Appleton-Century-Cofts, Inc., 1957, pp. 101-103.

[3] Harris, Albert J., *How to Increase Reading Ability,* New York, David McKay Co., Inc., 1961, p. 208.

[4] *Ibid.* p. 155.

[5] Hilgard, Ernest R., *Introduction in Psychology*. New York, Harcourt, Brace & World, Inc., third ed. 1962 p. 407.

[6] Harris, Albert J., *How to Increase Reading Ability*. New York, David McKay Co., Inc., 1961. p. 199.

[7] *Ibid.* pp. 158, 191-193, 195.

[8] *Ibid.* p. 217.

PART II

SOCIAL AND PSYCHOLOGICAL BASES OF ADULT BASIC EDUCATION

'Now I'm a person!'

BASIC EDUCATION CLASS AIDS ADULTS

Elizabeth P. Lewis
Milton J. Ness

Do youngsters in your class wonder whether or not school is worthwhile? Do they realize how much it is worth to be able to draw meaning from the printed pages? This article about a sampling of functional illiterates tells the story far more adequately than any theoretical replies.

Last fall the Appleton Vocational, Technical and Adult School made a study of literacy in Appleton and Outagamie County. Although the number of functional illiterates was less than .2%, an advisory committee was formed, composed of a cross section of public agencies, educators, employment service representatives and religious leaders.

After the facts had been presented and an inquiry made whether an Adult Basic Education class should be started, the committee felt that a program merited initiating. The class was to be composed of adults, 18 years or older, who read or had arithmetic skills below the sixth grade level.

An instructor was obtained who had taught in a literacy program, publicity was given to the program and the course was offered to the residents of the Fox Cities. This program is under Title II of the Economic Opportunity Act and administered by the State Board of Vocational, Technical and Adult Education.

Eight brave men met for the first class in literacy or Basic English on Valentine's Day, 1966, in the Appleton Vocational and

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Technical School. Two others who had wanted the course never registered.

Their bravery consisted of breaking out of the shell of secrecy surrounding the fact that they were functionally illiterate. They didn't want the boss to know; they didn't want their friends to know. They still aren't ready for publicity, but they are moving toward pride in what they have already accomplished. They have always preferred to meet in a second floor classroom rather than in the library where people passing in the hall could look in and see them.

In literacy workshops, we are advised to help adult students get acquainted at the very first meeting, having each one tell something about his family. The reserve of these men was such that I did not try this at the first meeting. Each one was here to read, so we began immediately with consonants, vowels and the phonics for which they were asking.

We have learned a good deal about each other since that first meeting, but the information has come in its own good time when each one felt ready for it. Sometimes it comes in class, sometimes before class or during the break. I never go to the coffee break, feeling that the men will mingle more freely with other students if I am not nearby. I stay in the room. Sometimes one, sometimes two men stay for a private conference at that time.

The men themselves are unique in the literacy program because they did not come recommended by welfare agencies. They learned of the class through radio advertising, friends, the newspaper; they came voluntarily.

One of the men, whom I shall call Al, is 31 years old and has two brothers who graduated from college.

I said, "Whatever happened to you?"

He said, "I didn't care."

He slid through six or seven grades not caring. It was a severe "not caring," because he told us in class later that he had had psychiatric treatments and his reading block went back to something that had happened at school.

At age 29, Al cared enough to spend a whole winter teaching himself to read a book of instructions so that he could repair his car. During our class, he borrowed my copy of Dr. Seuss's *The Cat* *in the Hat*, to read to his small children.

He told me, "I don't know when you'll get your *Cat in the Hat* back. My children gather round me every night and demand that I read to them. They like it."

One night after class, with his face contorted by his effort to speak effectively he said, "Do you have any books on personality or psychiatry? I'm interested in things like that."

I brought him a book that I had given to my own children, Overstreet's *The Mature Mind.* My intention was to help him with parts of it in class, but he took it home. He came back to report: "It took me four hours to read one page, but I learned that you can be 40 years old and still not be grown up in your actions."

In class he kept probing: "Why is each one of us here? I get a good job and then they advance me to work in the office, where I have to read and write. I'm not there very long before they know I'm bluffing. I've lost three jobs like that."

He feels the burden of lost years. He wants to get his high school work as soon as possible and then go on, if he can, to do some college work.

Burt is a reserved man, 45 years old, he told the class. For weeks the only thing he said about himself was that he had no family and could get no help with his lessons. Nothing more.

One night Al asked, "If you were standing listening to two men talking and you knew that what they said was wrong, should you correct them?"

With a rush of words, the answer came from Burt, "I've lost two jobs like that. Once I found a mistake in the boss's blueprints. Once I made an improvement on a machine that would have saved a whole day on a job. I've worked in a machine shop all my life."

And so we learned of him. How had he not learned to read and write? He was part of a closely-knit national group speaking the old tongue. The old ones died and the young ones moved away. The only thing he ever talks about is his work.

He said, "You know, you can learn to read on TV. The commercials say the word and then you see it." I though of DUZ with its D-U-Z does everything. Of course one can learn from TV.

Cass is the wanderer. He comes faithfully for awhile and then goes to Chicago or Detroit. As a young boy, he was a lay brother in a monastery. At that time, 15 years ago, he bought an album of phonics records. He brought the records to class and the men wanted to hear them. While the group listened, I worked with each one individually. After that, we did not use the records again. Cass had not used the records in all the 15 years. When he entered our class, he worked on a farm, but has left the farm job and is moving around now.

Dale, 21 years old, joined the class late and came four times. We lost him to the Army. He was deadly serious about learning to read. He drove 40 miles round trip to class every night. The night I brought *The Cat in the Hat*, hoping some father would want to read it to his children, Dale pounced on it and asked to take it home.

I said, "It's a child's book."

"Ma'am," he said, "I'm reading everything easy I can get my hands on. I check out children's books from the library."

The next night he skipped the break and stood at my elbow reading *The Cat in the Hat* as fast as he could.

He usually wrote out a problem in long division for me to help him with. He said that the men in the iron works where he was employed helped him an hour and a half a day with arithmetic, getting him ready to work in the office.

He came last on a Thursday saying, "I have to go to Milwaukee for my second physical for the draft. I failed the reading test before. They don't want me. I'll be back in time for class Monday night." We haven't seen him since. He must have learned just enough to pass that test.

One of our youngest ones, Ed, 21, had been in local special education classes. He never misses a class, was the first one to buy a dictionary, has a good job sharpening big paper cutters for the mills and is radiantly happy over his coming marriage.

Ed's handicap was diagnosed by his special education teacher as coming from a birth injury. He has had the most difficulty of all in the class, with each student chiming in to help him over difficulties almost before he met them. In his case and Burt's, I have found a much better quality of reading when they read to me alone rather than in front of the class.

After prolonged incoherence in spelling, suddenly he had almost perfect papers two nights in one week. The next week he teased me by spelling words from my book which he was looking at upside down. He told me he had studied printing at the Vocational school.

He loves to work arithmetic problems, rarely making a mistake. I was at the point of teaching him to read through numbers when he finally became coherent in spelling. My question is this: Is he actually beginning to function in the use of letters and words, or can we always expect him to have a succession of very good and very bad times? There is never any fluctuation in his working with numbers. He retreats into arithmetic on a night when reading is hardest for him.

Fred is one of my hardest working students, one of the few to do homework. He works pages ahead of the others in the variety of books we use. He has frozen himself in a non-reading job in a mill, a job which will cease to exist in a short time. He will be ready to move up a notch. He is highly responsible, happy at home with his wife and adopted children. He has a good sense of humor which helps the morale of the class. He built his own home.

I found out recently that he was once in a special education class. I couldn't help saying, "I think you may have been wrongly placed."

He answered, "I thought so myself at the time."

George has perhaps the greatest variety of problems. I think his wife is probably the most highly educated of any student's wife; this is a hardship for both of them. When his little daughter wanted him to read to her and he literally couldn't, he suffered the hurt of hearing her say, "Oh, you dumb daddy."

A year ago a psychologist tested him and told him that at age 40 he was too old to learn. At age 41, he is one of my best students.

His education stopped at third grade when he was put to making baskets in an opportunity room. Our class began in mid-February and in May this man was reading in a low seventh grade geography and seventh grade *Junior Scholastic*. He always urges our reading in the geographies: "There's so much to learn in them that they get my curiosity stirred up. I keep wanting to read ahead."

He uses his phonics, but sometimes tackles words for which we have not studied all the sounds: "Pittsburgh––that can't be––is it––Pittsburgh?"

"Yes, it's Pittsburgh." And so it goes, my main task being to convince him he's right.

They read on this level, but we have many phonic charts yet to learn, and spelling, and writing, before their learning is uniform. They are beginning to take their reading for granted. Last week, two of them expressed their sense of surprise when it came to them that they could not write on that level.

George wants not only a stronger family life, but he wants to stop "being pushed around on the job." In fall, he plans to study welding. He and the others have just begun studying the booklet on becoming licensed as a chauffeur

Hal, although a bona fide graduate of a smalltown high school, has been functionally illiterate. He works in an electronics firm and studied welding last spring. He brought his wife to class so she could help him at home, since he can come but once a week or less. He built his own home and owns rental property.

I asked him what happened in his education. His answer: "I was too shy to recite and didn't do any work, but they passed me anyway. The schools passed me as a youth but failed me as an adult."

He says that reading in front of our class has helped him stop being shy. He has a slight speech impediment. Maybe children laughed at him while in the grades and brought on his shyness. Although he does things with the most ease of anyone in class, he wants to take part in everything as he builds up his confidence. He wants to continue with the class next year.

Ivan works on the city streets and will soon become a full time janitor in the home for the aged. He hates being on garbage detail, but likes working on lawns and gardens in the parks. When he told his fellow workers he was learning to read, they teased him by asking to pronounce "aqua." In telling me about it, he pronounced it correctly and asked what it meant. I explained it and told him to tell the men he was using both a Latin and an English word.

He works hard in class after eight hours on the city streets and part time as a janitor. His special lack of confidence has led me to have frequent silent reading periods with comprehension tests so that he can actually see what he can do alone.

The quality all of these men have in common is lack of self confidence. This leads them to ask, "What level are we reading on?" And another question that comes, "What do you think of us?"

I tell them they are brave, hard working men and really don't know how much they do know.

"Are you putting us on?"

"No, I'm not putting you on."

Once one of them asked me to spell flange. I wrote it on the board. Then I said, "I can spell it, but I really don't know what it is."

One looked at me searchingly, "Do you really want to know what it is?" I nodded. So with gesturing hands and an excellent choice of words, he defined "flange."

Then he said, "I see what you mean. We have experience and that counts for something."

Al, the one who dreams of doing college work, has often started to say something and not been able to go on. I see the great effort, with not enough words coming for me to help him by suggesting a word; so I wait and soon the words come.

Once he said, "Thank you for waiting when I needed to say something. It helps me so much. Sometimes I get impatient when the others want to talk, and then I remember how it helps me to talk, so I'm content to wait for them."

We have used a variety of books and systems: Laubach, Steck Publishing Co., and Mott. Our mainstay is Henney's *System for Success,*which I studied in North Carolina (required of all N.C. Literacy Workers) now being published by Follett. We work with phonics in this for one hour each class period. The men like this variety of material, borrowing samples to take home. They laugh about some of the odd sentences, but are quick to point out the reason for the repetition and other devices in learning.

It has been a wonderful class to teach. My effort has been to make each class meaningful, so that it will truly be the class they have wanted for so long. They are just ordinary people like the rest of us except they have never acquired the necessary skill of combining 26 letters into words.

One member of the class has an unusual ability to go right to the heart of a problem. In any discussion, he is the one who cuts through all irrelevant material to find the essence. He makes his decision on this basis. How valuable he would have been on a board of directors if he had had the proper background.

The ones who didn't come to class haunt me—the woman with her face so badly scarred that she didn't want anybody to see her; the man in such a responsible position he felt he couldn't afford to let either those above or below know about him. These need private tutoring.

One student summed up what the class had meant to him by saying, "It's like a light shining in my life. I'm a person now."

This is what Basic Education is all about.

Editor's note: The people and situations described are real. The names used are fictitious.

ADULT LEARNING AND THE ADULT LEARNER

Andrew Hendrickson

"ALL WE HAVE IS MONEY!" This remark was made by a participant in a recent Inter-University Workshop on adult basic education in trying to describe the plenitude of financial resouces and the paucity of personnel and material resources for teaching adults in some of the new programs. Adult education in general is feeling the heady results of having sifted from a deprived situation where no federal funds were available to one where it is suddenly overwhelmed with money resouces. All forms of adult education up and down the educational ladder will receive assistance from new legislation which has been passed or will be passed during this year. In particular adult basic education is being provided for under a confusing number of federal acts. These include the National Housing Act, the Manpower Training and Development Act, Revised Vocational Act of 1963, the Economic Opportunity Act, Public Law 89-10, the Elementary and Secondary School Act [See Title III, Section 303, (B) (2).] In addition, further provisions will be made for this form of adult education under the Higher Education Act of 1965.

The greatest shortage, of course, in all the various programs receiving federal support is that of manpower. In staffing the various programs for teaching youth and adults under both the various provisions of the Economic Opportunity Act and the other relevant acts, many persons will be levied upon who are otherwise capable but who have had little training or experience in the teaching of adults, although many of them may have had experience in teaching children. This paper is offered as a means of helping such persons begin thinking about the characteristics of adults as learners as compared with children.

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In spite of the adage, "You can't teach an old dog new tricks," all adult educators are committed to the proposition that adults can learn. In fact, it may be time we invented a new slogan, "There are some tricks that only an old dog can learn!" Actually, it is not the question of whether or not adults can learn that concerns us, but such questions as how well do they learn? under what conditions do they learn best? and what can we as teachers and administrators do to enhance the learning situations for which we are responsible?

It has been well established that growing older does have its effects on the ability to learn—not all of them unfavorable. During the past fifty years there has been a large amount of testing and experimentation with individuals grouped according to age; and from the results inferences have been drawn about the decline of learning ability with age. There has been very little of the more important kind of study known as longitudinal studies where changes with age are recorded on the same individuals.

There are several difficulties in the way of running tests on great numbers of adults. One of these is the difficulty of getting adults to stand still long enough to be tested. In the case of children, one can, with the consent of school authorities, go into any number of classrooms and administer tests to captive audiences. Moreover, this can be done with the same children year after year. The problem with adults has been partly solved by Wechsler who tested hundreds of adults who were sick and confined to Bellevue Hospital in New York City. This probably accounts for the concern for mental deterioration shown in his book, *The Measurement of Adult Intelligence.*[1] Another captive adult audience is those found in prison, and numbers of adults in Sing-Sing and various reformatories have been studied.

Dr. Irving Lorge at Columbia University had a few hundred adults assigned to him as a W.P.A. project during the depression years. He put these adults through all kinds of tests and experiments, the results of which are found in Thorndike's book, *Adult Interests.*[2]

Another type of difficulty has to do with the type of testing materials available. Most of the tests either for general intelligence or for performance have been designed for use with children.

Children, through practice, become accustomed to taking such tests. Many middle-aged and older adults are not so accustomed. To them the many diverse, unconnected, and apparently purposeless questions often seem odd and confusing. The tasks involved in the usual intelligence test are largely clerical, somewhat bookish, and according to Pressey,[3] slanted in favor of the upper middle classes. They call for abilities which are developed and kept in practice in school but are less exercised in most adult occupations and activities. There is considerable thought that to some extent, the low scores in the later years may reflect poor cooperation on the part of adults rather than poor ability.

A third difficulty is the inability to test a group of the same adults year after year. Many longitudinal studies have been made of children, but only one sizable one of adults–that of Terman who identified about 1,400 gifted youth in the Los Angeles area in 1921. Several followup studies of these individuals have been made, but of course, this group is not typical of the general adult population.

But in spite of the various difficulties encountered in attempting to judge the effect of the maturing process on learning, certain general trends seem to be clear. First, mental ability, defined as the ability to perform the greatest amount of mental work in a given time, does decline with age. An averaging of the results of various researchers indicates that mental ability of adults thus defined reaches a peak in the early 20's declines rather slowly during the next two or three decades, and then falls off more rapidly in the 60's and 70's.

Because this curve of decline follows very closely the curve of decline in physical ability, early psychologists tended to associate the decline in mental performance entirely with physical decline. But here a word of caution may be in order. It is true that visual acuity, auditory acuity and such psychomotor functions as speed of reaction all reach their prime before the age of 25 and decline thereafter. This does not necessarily mean that mental ability declines the same way or at the same rate. What it may very well mean is that the decline in physical ability merely contributes to the slowing up of performance while ability remains unchanged. Indeed, there is plenty of evidence to indicate that it is not ability but only *speed* of performance that declines with age. For example, Lorge[4] has cited several experiments of his own and those of other psychologists which show that when the speed factor is removed from tests, adults do not tend to show decline with age but in some cases have showed increases in their learning abilities. Apparently the slowing up of the faculties of sight, hearing and reaction time tend to limit the *quantity* of performance, but have no ill effect on the *quality*, that is, the ability to solve problems.

To summarize this idea, the mental ability of adults as exhibited by performance on tests shows a gradual decline after the early 20's but this decline is related to speed of performance rather than quality. While the absolutely best time to learn anything may be in the 20's or early 30's, any decline in ability is so slight that adults in the mid-forties or early fifties can expect to learn as well as they could when they were in their mid-teens–which has always been considered an excellent time for learning.

So far we have been talking about group averages and we have been talking about them in terms of general ability or general intelligence. Group averages can be very misleading. There will usually be greater individual differences within any of the age groups tested than between any two contiguous age groups, and only a few individuals will have abilities at or near the average. Therefore, the important thing is the range of abilities within the group.

In addition to general ability, individuals also have special abilities. These are classed in various ways–verbal and non-verbal abilities, abilities in various content fields such as languages, mathematics, music, art, etc. An encouraging result of tests on special abilities is that in certain areas important to adult education such as general information, vocabulary, and items requiring reasoning and judgment, adults show little or no loss with age, and often show some gain. Lowest scores are attained on such tests as digit-symbols, encoding, and making up nonsense syllables.

In brief, as shown by tests of special ability, adults show loss with age on items unrelated to adult life and little or no loss, with sometimes gain, on items depending on mastery of vocabulary, general information, and on items depending on experience or judgment.

Two additional variations of the general decline in learning ability with age should be noted. First, there is much evidence to show that the more gifted the adult is the less he is inclined to show loss of ability with age. Second, adults who keep their mental faculties active tend to show little decline with age.

We may now ask, "Does age produce any advantages in the learning process?" The answer is in the affirmative. First, middle aged and older adults have accumulated a mass of experience and knowledge which is of invaluable assistance as they bring it to bear on their learning activities. Second, adults have fewer goals toward which to direct their efforts. Instead of proceeding in many directions as youth does, older persons conserve their efforts and energy by driving toward a few selected goals. Third, adults are highly motivated. They are neither "sent" nor "sentenced" to school. They come because they have a strong urge to learn. This urge is so strong it has successfully competed with fatigue, love of ease, desire for recreation, desire to be with family, and the pull of community responsibilities. Fourth, adults have better work habits. They have learned that to succeed, one must organize his efforts and persist in the direction of his goals. Finally, adults have more wisdom and judgment than youth. They have a feeling of what will work and what will not. They see relationships not visible to those younger. These gains with age go far to offset loss in speed and help to account for the fact that adults often outstrip youth in both scholastic and work performance. They also account for the fact that the acme in careers demanding organizational ability and mature judgment are most often reached in the fifties and sixties. This is particularly true in business and the professions.

The Sociology of Adult Learning

Up to this point we have been largely concerned with what happens *within* the person as he develops and matures. Now we should think for a while about *external* influences on him—what happens to him from the outside—his environment.

Adults are social beings and as such belong to various—

friendship groups, work groups, church groups, family groups, play groups, etc. Upon reaching maturity, adults take on many responsibilities, the most serious of which are those pertaining to their families, their work, and their community life.

As the adult performs in his various roles as worker, husband, father, citizen, church member, and club member, he is subjected to a variety of social pressures—pressures to attend meetings, to join clubs, to assist in various group and community tasks, to assume family responsibilities and perhaps most important of all, to advance in his work. While these pressures have little direct effect on the ability of the adult to learn once he is in class, they do determine whether or not he will attend class and for what purpose. It will be fruitful, I think, for us to chart these pressures in terms of positive and negative influences. Let us look at the positive influences first:

1. There is the pressure to prepare for a job and to receive training for advancement on the job.

2. The need to keep up with the technological and sociological changes in the swiftly moving world.

3. The need for self-fulfillment. This may take the form of cultural learning, learning for personal development, or for avocational and recreational skills.

4. The need to be an informed citizen.

5. The need for practical information for a particular purpose—making out income tax forms; buying or building a home; repairing equipment, etc.

Pressures in these directions are often increased by such circumstances as low tuition costs, approval and financial assistance from one's employer, and a social climate in the community favorable to adult education.

Now let us look at some of the pressures creating negative influences:

1. Since the adult's further education must be a marginal activity, engaged in largely in the evenings and on weekends, it is in sharp competition with his family, social, recreational, and community activities.

2. The extra time and energy consumed in commuting, in class attendance, and in homework often creates a health hazard.

3. In some cases, the extra costs of tuition, commuting, and books and supplies create a financial hazard.

4. The uncertainty of work hours caused by changing shifts or likelihood of being moved to another city can be a schedule hazard.

5. In some communities and among some groups, the idea of going to school is associated only with childhood—a psychological hazard. This is particularly true for those in 60's and 70's.

It is the balance of these encouraging and deterring forces which determines whether an adult will decide to utilize formal instructional opportunities to solve his problems.

Application of Research Findings

Now we come to the application of these findings to the teaching of these findings to the teaching-learning situation. What is the meaning of these facts about the psychology and sociology of adult learning to those of us who are teaching and administering classes?

First, if we are going to talk about adult learning, we had better define it. The purpose of learning is to institute change. In learning, we add to or modify our previously existing knowledge, skills, attitudes or appreciations.

Psychologists say that learning involves three elements: need, effort, and satisfaction. An individual feels a need, he puts forth an effort to meet the need, and experiences satisfaction with the result. The thing learned then becomes a part of him.[5] We may need to know how to take the square root of a number, we put forth the effort of reading a book or listening as a teacher demonstrates it on a blackboard, and we experience satisfaction as we find through practice that we can do it ourselves. Thus a new skill has been added to our mathematical accomplishments. Or to take another example: we may want to know more about the Revolutionary War. We put forth the effort of reading books in the library or we attend a class where there are readings, lectures, and class discussions. We find that the Revolutionary War was not such a simple thing as a war between Great Britain and the Colonies over taxation; but that it was part of a larger political conflict between the Whig and Tory parties, the conflict breaking out into open warfare in the Colonies, but being confined to political maneuvers, legislation, and oratory in the mother country. In this case, what has happened is not the adding of a new skill, but the *modification* of an old idea. Pressey and Robinson put it very succinctly when they say learning is "a process by which an individual makes some new skill or idea his own because in some way and to some degree it fills a need he feels."

If this is learning, then teaching may be something different than some of us have previously thought it to be. It is certainly much more than the mere imparting of knowledge. In fact, it is doubtful if knowledge can ever really be imparted. It can only be learned by effort on the part of the learner. In the true teaching-learning situation, the learner needs to know and the teacher provides the social, material, and psychological setting in which it is not only possible for the adult to learn, but normal and natural for him to do so. In the best situations, the adult will not only learn normally and with satisfaction, but he will do so with excitement, with joy, with the thrill that comes from using his powers to the fullest. The teacher then is not merely the person who tries to transport ideas from one head to another. He is the resource person, the stimulator, the clarifier, the catalyst, and the integrator of the group – any and all of these things as and when he needs to be. Teaching is the name we give to the guided interaction between student, teacher, and teaching materials which causes learning to take place.

In general, the mechanics and the motivating forces involved in the learning process do not greatly differ as between children and adults; the chief differences between the child and the adult as learners are the effect on the learning process of the adult's different level of inner maturity and of the different social environment in which he lives. Children learn through such means as suggestion, imitation, trial and error, and reasoning. They are motivated by such things as curiosity, desire to achieve, desire for new experiences, material rewards, and feelings of success. Adults use the same means and respond to the same motivations. The difference is that in the case of the adult, the application of these means is sharply modified by such things as the difference in his goals, the limiting of opportunity, the slowing up of his motor activity with age, the attitudes the adult has toward learning, his concepts about himself, the amount of his schooling, and his remoteness from previous schooling.

In the light of these facts, what are some of the principles and practices which, if put into effect, will provide for satisfying learning experiences? The following statements of principles are offered for the consideration of those who may be called upon to teach adults in one of the many new programs supported by federal legislation:

1. *Good teaching takes into account past negative school experiences, remoteness of past schooling and the self doubts of adults, and provides at the earliest possible time in the class for encouragement and for an experience of success.* This can be done by discussing with the class the well-established facts about the ability of adults to learn, or by giving a short review test in the subject, making it simple enough that most any student would get several "right" answers.

2. *Good teaching takes into account the relation between a pleasant social atmosphere and a satisfying educational experience.* When an adult leaves his family fireside, faces the psychological barriers of entering a building customarily used by children, his footsteps echoing down the dimly lit halls, and enters a room filled with strangers, it may be "an adventure into loneliness." But if he is greeted cheerfully by his teacher, introduced to fellow classmates, and finds other persons who have like problems, all this will change. A good social atmosphere will rid him of the feeling of isolation, bolster his ego, help him to maintain his personal identity, and assist in making the learning experience a meaningful one.

3. *Good teaching takes into account not only the need for an early experience of success, but the need for frequently recurring experiences of success.* Adults should be able to relate the results of each class period to the goals of the course or activity. At the end of each class experience, the adult should be able to say to himself something like the following: "I came into his class to learn to converse in French. Tonight I learned how to pronounce and use in sentences twelve new words. I'm making progress!"

4. *Good teaching takes into account the loss of speed in performance in academic activity during the mature years.* The activities of the group should be paced rapidly enough to be challenging but not so rapid as to be frustrating. Relatedly, since adults may read more slowly and have less time for reading, outside assignments should be selected so as to be most central to the activity concerned.

5. *Good teaching recognizes the validity of the principle of involvement.* When a person does something himself or says something in his own words, it will have more meaning than something said or done by another person. Therefore, the more students can share in determining the goals of the course, and in determining the class activities, the more they are likely to feel a personal commitment to the success of these goals and activities.

6. *Good teaching recognizes the adults themselves as a prime teaching resource.* Each class or group of adults is characterized by a variety of talent and experiences. It is the responsibility of the teacher to study the backgrounds of each member of his group so as to utilize to the maximum degree the talents of each member for the benefit of the group as a whole.

7. *Good teaching recognizes the concreteness and immediacy of most adult goals.* As a rule, adults appreciate applied knowledge and concrete illustrations rather than detailed statements of theory. Theory may be arrived at through the inductive method where it is based on generalizations drawn from many practical situations.

8. *Good teaching takes into account the key place which motivation holds in the learning process.* Adults should want to learn. It is safe to assume that when adults come to class, they do want to learn. But sometimes adults are discouraged by the gap between what they know and what they want to know. The teacher should help the student to see that learning is a step by step process, not something to be accomplished all at once. He can help the student to analyze his goals and abilities realistically so that he is stimulated to want to achieve what he can.

9. *Good teaching recognizes physical and mental fatigue as a deterring factor in adult learning.* Most adults attend classes in the evening or late afternoon after they have done a full day's work

and commuted some distance. Presenting the material in a dramatic fashion, skillful use of audio-visual materials, and frequent change of pace will tend to offset the effects of fatigue and keep a high level of interest in the subject.

10. *Good teaching recognizes each teaching experience as an opportuinity for professional growth.*Good teachers often learn more in a course than their students. The sincere teacher, in urging the growth of others, will miss no opportunity to grow himself.

FOOTNOTES

[1] Wechsler, David. *The Measurement of Adult Intelligence.* Baltimore: Williams and Wilkins, 1944. Chap. 6, "The Problem of Mental Deterioration."

[2] Thorndike, E. L., *Adult Interests.* New York: Macmillan, 1936.

[3] Pressey, Sidney L. and Kuhlen, Raymond G. *Psychological Development Through the Life Span.* New York: Harpers 1957, pp. 111-113.

[4] Lorge, Irving. "Capacities of Older Adults," Chapter 111 in *Education for Later Maturity.* (Wilma Donahue, ed.) New York: Whiteside, 1955.

[5] See Pressey, Sidney L. and Robinson, Francis P. *Psychology and the New Education.* New York: Harpers, 1944, pp. 465-66..

PRINCIPLES AND CONDITIONS FOR LEARNING IN ADULT EDUCATION

Gerald J. Pine and Peter J. Horne

Introduction and Purpose

In 1967, Austin E. Bennett of the University of Maine, working in the New England Center for Continuing Education, conceived a project designed to teach helping relationship and problem solving skills to the rurally poor of northern New England. The project became known as the Operation Mainstream counseling training program. It was funded by a grant from the U.S. Department of Labor and initiated in September, 1967. The purpose of the Operation Mainstream counseling training program was to change the behavior of 120 community aides so that they would acquire problem solving and helping skills which they could use in helping others among the poor to solve their own problems.* The aides were employed by Community Action Programs operating in northern Maine, New Hampshire, and Vermont. An evaluation of the Operation Mainstream counseling education project produced a large amount of data from which the authors have been able to abstract a number of principles and conditions regarding learning and behavioral change. It is the purpose of this article to discuss these principles and conditions and their implications for adult education.

Sources of Data

The principles and conditions which have been identified and developed reflect information obtained from:

1. Documentation reports of training session;
2. Interviews with supervisors of community aides;
3. Dialogues with training staff;
4. Reports of activities written by aides;
5. Observation of training sessions;
6. Program agenda for training sessions.

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The principles and concepts culled from the O. M. program in some cases were explicitly stated in the material evaluated, in other cases the principles were inferred, and in a few cases the application and the translation of principles were observed.

It should be noted that the psychology of perception may have affected what was seen and considered significant. People see what they wish to see and hear what they wish to hear. The reader is advised that as objective evaluators the writers cannot claim that they were entirely free from selectivity in perception, at least to the degree that this factor operates in evaluations.

The principles and conditions are stated in general terms and not in reference to the Operation Mainstream program. They are principles which the writers believe can be translated into an educational process which will assist a variety of adults in a variety of situations to learn how to govern their own lives so that they can become more fully-functioning and more productive members of society.

Underlying Definitions

The principles and conditions of learning as they are delineated here reflect the following definitions:

Helping Relationship—Process which helps people to help themselves to learn and solve problems themselves.

Learning—Changing behavior in a positive direction. Refers to learning necessary for the solution of practical economic, social, political, and personal problems of living encountered by individuals, groups and communities.

Behavior—Attitudes, ideas, values, skills, interests.

Positive Direction—Directions which enhance the self, others, and the community.

Goal of Learning—To enable individuals, groups of people and communities to become more fully functioning, effective, and productive entities in society.

Principles of Learning

Principle 1.

Learning is an experience which occurs inside the learner and is activated by the learner. The process of learning is primarily controlled by the learner and not by the teacher (group leader). Changes in perception and behavior are more products of human meaning and perceiving rather than any forces exerted upon the individual. Learning is not only a function of what a teacher does to or says to or provides for a learner. More significantly, learning has to do with something which happens in the unique world of the learner. It flourishes in a situation in which teaching is seen as a facilitating process that assists people to explore and discover the personal meaning of events for them.

No one directly teaches anyone anything of significance. If teaching is defined as a process of directly communicating an experience or a fragment of knowledge, then it is clear that little learning occurs as a result of this process and the learning that does take place is usually inconsequential. People learn what they want to learn, they see what they want to see, and hear what they want to hear. Learning cannot be imposed. When we impose ideas on people we train them. When we create an atmosphere in which people are free to explore ideas in dialogue and through interaction with other people, we educate them. Very little learning takes place without personal involvement and meaning on the part of the learner. Unless what is being taught has personal meaning for the individual he will shut it out from his field of perception. People forget most of the content "taught" to them and retain only the content which they use in their work or content which is relevant to them personally.

Principle 2.

Learning is the discovery of the personal meaning and relevance of ideas. People more readily internalize and implement concepts and ideas which are relevant to their needs and problems. Learning is a process which requires the exploration of ideas in relation to self and community so that people can determine what their needs are, what goals they would like to formulate, what issues they would like to discuss, and what content they would like to learn. Within broad programmatic boundaries what is relevant and meaningful is decided by the learner(s), and must be discovered by the learner.

Principle 3.

Learning (behavioral change) is a consequence of experience. People become responsible when they have really assumed responsibility, they become independent when they have experienced independent behavior, they become able when they have experienced success, they begin to feel important when they are important to somebody, they feel liked when someone likes them. People do not change their behavior merely because someone tells them to do so or tells them how to change. For effective learning giving information is not enough, *e.g.*, people become responsible and independent not from having other people tell them that they should be responsible and independent but from having experienced authentic responsibility and independence.

Principle 4.

Learning is a cooperative and collaborative process. Cooperation fosters learning–"Two heads are better than one." People enjoy functioning independently but they also enjoy functioning interdependently. The interactive process appears to "scratch and nick" people's curiosity, potential, and creativity. Cooperative approaches are enabling. Through such approaches people learn to define goals, to plan, to interact and to try to group arrangements in problem solving. Paradoxically, as people invest themselves in collaborative group approaches they develop a firmer sense of their own identification. They begin to realize that they count, that they have something to give and to learn. Problems which are identified and delineated through cooperative interaction appear to challenge and to stretch people to produce creative solutions and to become more creative individuals.

Principle 5.

Learning is an evolutionary process. Behavioral changes requires time and patience. Learning is not a revolutionary process. When quick changes in behavior are demanded we often resort to highly structured procedures through which we attempt to impose learning. Whether such learning is lasting and meaningful to the learner is doubtful. Implicit in all the principles and conditions for learning is an evolutionary model of learning. Learning situations characterized by free and open communication, confrontation, acceptance, respect, the right to make mistakes, self-revelation, cooperation and collaboration, ambiguity, shared evaluation, active and personal involvement, freedom from threat, and trust in the self are evolutionary in nature.

Principle 6.

Learning is sometimes a painful process. Behavioral change often calls for giving up the old and comfortable ways of believing, thinking, and valuing. It is not easy to discard familiar ways of doing things and incorporate new behavior. It is often "downright" uncomfortable to share one's self openly, to put one's ideas under the microscope of a group, and to genuinely confront other people. If growth is to occur pain is often necessary. However, the pain of breaking away from the old and the comfortable is usually followed by appreciation and pleasure in the discovery of an evolving idea or a changing self.

Principle 7.

One of the richest resources for learning is the learner himself. In a day and age when so much emphasis is being placed upon instructional media, books, and speakers as resources for learning we tend to overlook perhaps the richest resource of all—the learner himself. Each individual has an accumulation of experiences, ideas, feelings, and attitudes which comprise a rich vein of material for problem-solving and learning. All too often this vein is barely tapped. Situations which enable people to become open to themselves, to draw upon their personal collection of data, and to share their data in cooperative interaction with others maximize learning.

Principle 8.

The process of learning is emotional as well as intellectual.

Learning is affected by the total state of the individual. People are feeling beings as well as thinking beings and when their feelings and thoughts are in harmony learning is maximized. To create the optimal conditions in a group for learning to occur, *people must come before purpose.* Regardless of the purpose of a group it cannot be effectively accomplished when other things get in the way. If the purpose of the group is to design and carry out some task it will not be optimally achieved if people in the group are fighting and working against each other. If the purpose of the group is to discuss current issues and problems in a given field with reason and honesty then it will not be achieved if people are afraid to communicate openly. Barriers to communication exist in people and before we can conduct "official business" we need to work with the people problems that may exist in a group. It might be said that in any group, regardless of the people problems which exist, enough group intellectual capacity remains intact for members of the group to acquire information and skills. However, to maximize the acquisition and internalization of ideas it seems reasonable that the people problems would have to be dealt with first.

Principle 9.

The processes of problem solving and learning are highly unique and individual. Each person has his own unique styles of learning and solving problems. Some personal styles of learning and problem solving are highly effective, other styles are not as effective, and still others may be ineffective. We need to assist people to define and to make explicit to themselves the approaches they ordinarily use so that they can become more effective in problem solving and learning. As people become more aware of how they learn and solve problems and become exposed to alternative models used by other people they can refine and modify their personal styles so that these can be employed more effectively.

Conditions Which Facilitate Learning

Condition 1.

Learning is facilitated in an atmosphere which encourages *people to be active.* The learning process thrives when there is less teacher (group leader) domination and talk and more faith that people can find alternatives and solutions satisfying to themselves. Listening to people and allowing them to use the teacher (group leader) and the group as a resource and a sounding board, facilitates the active exploration of ideas and possible solutions to problems. People are not passive and reactive receptacles into which we can pour the "right" values, the "right" answers, and the "right" ways of thinking. People are active and creative beings who need the opportunity to determine goals, issues to be discussed, and the means of evaluating themselves. They learn when they feel they are a part of what is going on–when they are personally involved. Learning is not poured into people, learning emerges from people.

Condition 2.

Learning is facilitated in an atmosphere which promotes and facilitates the individual's discovery of the personal meaning of ideas. This means that the teacher (group leader) rather than directing or manipulating people helps them to discover the personal meaning of ideas and events for them. He creates a situation in which people are freely able to express their needs rather than having their needs dictated to them. Learning becomes an activity in which the needs of the individual and the group are considered in deciding what issues will be explored and what the subject matter will be.

No matter how permissive or unstructured a learning activity may be, there exist implicit goals in the activity itself–a group leader (teacher) is never goalless. Learning occurs when the goals of the leader accommodate, facilitate, and encourage the individual's discovery of personal goals and personal meanings in events. The art of helping people to change their behavior requires the development of goals which provide sufficient elbow room for people to explore and internalize behavior satisfying and growth-producing to themselves.

Condition 3.

Learning is facilitated in an atmosphere which emphasizes the *uniquely personal and subjective nature of learning.* In such a situation, each individual has the feeling that *his* ideas, *his* feelings, *his* perspectives have value and significance. People need to develop an awareness that all that is to be learned is not outside or external to themselves. They develop such an awareness when they feel their own contributions and their value as people are genuinely appreciated.

Condition 4.

Learning is facilitated in an atmosphere in which difference is good and desirable. Situations which emphasize the "one right answer," the "magical solution," or the "one good way" to act or to think, or to behave, narrow and limit exploration and inhibit discovery. If people are to look at themselves, at others, and at ideas openly and reasonably, then they must have the opportunity to express their opinions no matter how different they may be. This calls for an atmosphere in which different ideas can be *accepted* (but not necessarily agreed with). Differences in ideas must be accepted if differences in people are to be, too.

Condition 5.

Learning is facilitated in an atmosphere which consistently recognizes people's right to make mistakes. Where mistakes are not permitted then the freedom and the willingness of people to make choices are severely limited. Growth and change are facilitated when error is accepted as a natural part of the learning process. The learning process requires the challenge of new and different experiences, the trying of the unknown, and therefore, necessarily must involve the making of mistakes. In order for people to learn they need the opportunity to explore new situations and ideas without being penalized or punished for mistakes which are integral to the activity of learning. The teacher (group leader) who feels and acts on the need to be always right creates a limiting and threatening condition to learning.

Condition 6.

Learning is facilitated in an atmosphere which tolerates ambiguity. In a rigid and defensive atmosphere people feel they cannot take the time to look at many solutions, they feel highly uncomfortable without answers, and they feel there is more concern for "right" answers rather than good answers. The open and fearless exploration of solutions calls for time to explore many alternatives and time to proceed without feeling any pressures for immediate and forthcoming answers.

Conditon 7.

Learning is facilitated in an atmosphere in which evaluation is a cooperative process with emphasis on self-evaluation. If learning is a personal process, then people need the opportunity to formulate the criteria to measure their progress. Criteria established by the teacher (group leader) are mostly artificial and irrelevant to persons in a group. Usually behavioral change and growth are measured by the degree to which people can regurgitate what others have tried to spoonfeed to them. It is obvious that anyone can play the game of "giving the teacher what he wants." A more viable and meaningful evaluation occurs when people are free to examine themselves and the roles they play with other people. Self evaluation and peer evaluation enable people to really judge how much they have learned and grown, *e.g.*, through audio and/or video taped recordings of their behavior people can see themselves in the process of learning. Such recordings provide tangible and concrete evidence of progress and provide a rich source of material to the group for learning. New insights evolve as people see themselves as they really are. For learning to occur the individual in the group needs to see himself accurately and realistically. This can be best accomplished through self and group evaluation.

Condition 8.

Learning is facilitated in an atmosphere which encourages openness of self rather than concealment of self. Problem solving and learning require that personal feelings, attitudes, ideas, questions, and concerns be openly brought to light and examined. To the degree that an idea, a thought, a feeling, or an attitude related to the topic at hand is held back and not openly expressed—to that degree are the processes of learning and discovery inhibited. People need to feel that they can try something, fail if necessary without being humiliated, embarrassed, or diminished as persons. Openness of self occurs in an atmosphere free from psychological threat. People can invest themselves fully and openly in the collaborative and interactive process of learning when they know that no matter what they say or express it will not result in psychological punishment or penalties.

Condition 9.

Learning is facilitated in an atmosphere in which people are encouraged to trust in themselves as well as in external sources. They become less dependent upon authority when they can open up the self and when they feel that who they are is a valuable resource for learning. It is important that people feel that they have something to bring to the learning situation rather than feeling that all learning means the acquisition of acts and knowledge from some external agent for use sometime in the future. People learn when they begin to see *themselves* as the wellsprings of ideas and alternatives to problems. Learning is facilitated when people begin to draw ideas from themselves and others rather than relying on the teacher (group leader).

Condition 10.

Learning is facilitated in an atmosphere in which people feel they are respected. In a group in which high value is placed upon the individuality of the members and upon the relationships that exist within the group, people learn that someone cares for them. A genuine expression of care *on the part of the teacher (leader)* and a warm emotional climate generate an atmosphere of safety in which people can explore ideas and genuinely encounter other people without any threat. Confrontations and differences of opinion become constructive forces in a group in which people experience that they are respected as persons. A safe atmosphere need not exclude personal confrontations which often are effective catalysts for learning.

Condition 11.

Learning is facilitated in an atmosphere in which people feel they are accepted. People are free to change when they feel that change isn't being imposed upon them. It's paradoxical but the more we try to change people the more resistant they become to change. A person must *be* before he can *become.* Accepting a person means that we allow him to hold his values and to be himself. When a man does not have to defend himself or his values then he is free to take a look at himself and his values and to change. An insistence of change contains an implicit not of rejection. In effect, we say to people–I can't accept you as you are; you must change. People need to feel they have an option–to change or not to change. They develop this feeling when they experience that they are accepted for who they are. When people or their values are attacked it is natural they they will defend themselves. People who are busy defending themselves are not free to learn.

Condition 12.

Learning is facilitated in an atmosphere which permits confrontation. With free and open communication, with a non-threatening psychological climate, the unique self of each person is expressed. It is inevitable that in such a situation persons will confront persons, ideas will challenge ideas. Confrontations facilitate learning. They provide opportunities for people to have their ideas and themselves viewed and tested from the framework of other people or the group. No man learns in isolation from other people. His behavior changes and his ideas are refined and modified on the basis of the feedback he gets from other people. Confrontation is a proving ground which enables ideas to be synthesized, new ideas to emerge, and people to change.

Conclusion

An educational program that will effectively assist different groups of adults to acquire problem solving and helping relationship skills has been developed around the principles, concepts, and conditions for learning which have emerged from the Operation

Mainstream counseling training project. The implementation of this educational program will provide an opportunity to refine, modify, and/or verify the principles discussed here. It is the writers' hope that the discussion of the principles and conditions for learning will elicit some reactions and suggestions from the reader and stimulate a new perspective on adult education.

A STUDY OF SOCIAL CONTROLS IN THE ADULT SCHOOL

Jack London

In every known human group social controls operate to ensure conformity to established norms and values of the society. All groups, organizations, and societies must establish controls in order to operate effectively. In a general sense, social control describes the process by which a group achieves conformity to the common expectations which are an essential basis for the organization of its activities. If we use social control to refer to the way in which a society develops and maintains itself, we realize the great importance of these controls and the value of examining them as a way of understanding the behavior of individuals, occupational groupings, organizations, institutions, and total societies. Accordingly, the purpose of this article is to examine some of the social controls which have been identified as significant in the operation of public school adult education programs in California.

Data for this article were obtained through participant observation and interviewing of adult school administrators and teachers over an extended period of time. Other information about adult school organization in California was obtained from school records, schedules, documents, and adult education literature. A more detailed discussion of methodology will be presented in a forthcoming monograph on public school adult education in California.

Ideal Types of Adult School Situations

Two ideal types of public school situations have been indentified to characterize public school adult education in California.[1] Briefly, one situation is that of the school which organizes its curriculum primarily upon the criterion of

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popularity. This is done to attract a large enrollment in order to maximize state financial aid and thereby recover the major part of the cost of the adult program.[2] This situation will be referred to hereafter as the expedient type. A second type of situation is one in which the school board has a strong interest and commitment in supporting adult education as an integral part of the total educational program, and allocates local funds to support a substantial part of the cost of this program.[3] This will be referred to as the principled type.

The expedient and principled types of adult school organization represent the extremes of perspective in California. These social types are utilized to depict the essential qualities of each ideal type of situation, independent of any particular adult school organization. The purpose of this analysis is to provide a theoretical construct rather than an accurate description of existing school programs in order to get at the most significant dimensions of public school adult education programs. While we might not expect to find pure types which represent one or the other of the extremes of adult school organization, all adult schools exhibit tendencies which characterize each type. This method of analysis enables us to generalize about school organization. As a result, we can present a description of adult school organization which will enable us to understand the framework within which various types of social controls operate.

The administrator's role in each circumstance differs. The administrator in the expedient type of adult school must promote classes exclusively on the basis of popularity–to attract large numbers of students.[4] The absolute criterion of determining curriculum is a course's drawing power. Teachers are expected to maintain a minimum attendance varying from 15 to 24 students or their classes are cancelled. In this type of situation, the primary concern is to organize an adult program at very low, or no cost to the local district. Educational value or service to the adults of the community become secondary in importance to the primary pressure of the budget.

The Education Code of the state of California requires that each adult school offers a curriculum which includes courses in at least six of the fourteen areas listed:[5]

1. Agriculture
2. Arts
3. Business Education
4. Crafts
5. Engineering and Technological Subjects
6. Health and Physical Education
7. Homemaking Education
8. Industrial Arts
9. Language and Speech Arts
10. Mathematics
11. Music
12. Science
13. Social-Civics Education, including Citizenship
14. Trades and Industries

The purpose of this regulation is to provide legal pressure upon school districts to offer a balanced program of courses. While technically conforming to this requirement, the expedient type of adult school is not basically concerned with a balanced program, and essentially does not provide one. This type of school can, for example, offer courses in business education, engineering and technological subjects, homemaking, industrial arts, citizenship, and trades and industries without providing a truly balanced curriculum—balance that includes a concern for remedial, vocational, and liberal education. The pressure for student enrollment exceeds the influence of educational standards, a balanced curriculum, and meeting the needs of the total adult population in the community.[6] And while the Education Code states that each adult school must provide an adequate counseling service,[7] the expedient type of school only furnishes over-the-counter counseling and telephone service for inquiries regarding class schedules and class locations. In such situations there is no provision for trained counselors except insofar as the overburdened administrator may assume this function. There is no organized plan of supervision or inservice education for adult teachers. The administrator, due to pressure from his own Board of Education and superintendent, is concerned with the sole pragmatic problem of whether the course will pay its way, and thereby, minimize the cost to the local district.

The principled type of adult school situation operates on the premise that adult education is an integral part of the educational system of the district and entitled to a fair share of the district's resources. This is based upon the conviction that adult education is not a luxury or solely a remedial educational service but a necessity in a mass industrial society involved in a very rapid social change. The administrator is carefully selected for his background and interest in adult education, and for his commitment to adult education as a life-long career.[8] He is the type of person who is himself a student, engaged in a program of self-improvement through liberalizing studies which constantly expand his understanding of the nature of man and his world.[9] He is an administrator who understands the major prerequisites for effective program planning are interest and an inquiring mind which constantly seeks insights into the nature of the adult–his needs, ambitions, fears, problems, and expectations. This type of school offers a balanced program in most of the areas listed in the Education Code, and essentially strives to achieve the spirit of this legal provision in order to reach adults at all socio-economic levels of the community. Ample administrative, counseling, and secretarial services are provided by the district.

Programming in the principled type of adult school is designed to reach all segments of the community which may be interested in adult education activities. The school's objective is not to offer courses which will merely attract a large enrollment, as an end in itself, but to offer what adults need and want, and to provide leadership in helping them improve leadership in helping them improve in understanding their problems and the world in which they live.[10] The liberal-education phase of the program assumes equal importance with the occupationally and remedially oriented activities. Here also a concerted effort is made to liberalize the teaching of technical subjects.[11] The administrator is given sufficient resources to experiment with new courses and other program activities, and allowed time to prove their value. All teachers are given supervisory assistance to improve their effectiveness in teaching in adults, and an on-going in-service education program is provided for the staff. An important general objective of the principled type of school (and also a general objective of public school adult education in California) is to promote the concept of life-long learning in the adult propulation of the community.[12]

As mentioned earlier, these two adult school situtations–expedient and principled–represent the two extemes of adult school organization. All adult programs in the state of California may be arranged at some point on a continuum between these two types. In many respects, the standards established by the Bureau of Adult Education and the California Association of Adult Education Administrators[13]strive to promote the principled type of adult school. But the path of progress is long and tortuous.

Goals of Adult Education

The goals of adult education are designed to provide general guidance for the development of curriculum in public adult programs, and as a result, serve as a source of control over program determination. In California, the Bureau of Adult Education, cooperation with the California Association of Adult Education Administrators has developed a set of objectives to assist school districts and administrators in constructing their programs. In providing such guidance, the official state *Handbook on Adult Education* presents a platform of public school adult education which defines its purpose as being ". . . first, to make adults in the community aware of individual and community needs, and second, to give such education as will enable them to meet problems that exist now."[14] The latest revised edition of this handbook lists seven objectives of adult education in the state which local programs are called upon to help adults achieve.

1. An awareness of their civic responsibilities to one another and to the community.
2. A proficiency in meeting economic needs and efficiency in managing the economic phases of their lives.
3. An understanding and adjustment for better home life and family relationships.
4. A sufficiently high degree of physical fitness to enjoy healthful living.
5. An appreciation of the fine arts and ability to participate in the cultural development of the community.

6. A sufficiently broad educational background to be able to explore new areas of learning.
7. Avocational interest and ability to use skills that are required in pursuing these interests.[15]

These established goals for public school adult education are stated in terms of the values accepted by the wider community; that is, in terms of the prevailing social philosophy, perspectives, and mores. Clark[16] criticized these objectives as being too general and open-ended to be of any value in serving as a source of guidance for the decision-making process in the adult school. Contrary to Clark's position, we assert that statewide objectives must be general and open-ended to meet the varied needs of adults for adult education services. The next step, however, is to break down these general objectives into more specific ones, which task should be undertaken by local school districts. The failure to redefine general objectives into more specific ones may be largely attributed to the fact that the task of formulating clear-cut specific goals of a program is a very difficult one.[17]

The formulation of specific objectives is necessary if learning is to be directed toward a desired end. Since the end of an adult education program is to change the behavior of adults, the function of specific objectives is to indicate what changes are to be expected as a result of contact with a program. What is required is to sharpen, make concrete, and re-express the general goals of adult education in California, cited above, in testable terms. In other words,the reformulation of general goals into specific objectives involves the spelling out of the behavioral aspects and the type of subject matter content required to achieve a desired behavioral change. This type of specificity results in the formulation of goals that can serve the function of a criterion for determining content, suggesting learning experiences, selecting methods, etc. Only as specific goals are formulated at the school district level may we expect that the expressed objectives of a program will serve the function of guiding the curriculum decision-making process within the adult school.

Tyler[18] suggests a useful way for formulating specific objectives through the construction of a two dimensional chart which lists the specific behavioral changes desired and the items of subject matter selected to produce these changes. This type of chart may be helpful in assisting the administrator and the teacher in cross checking objectives with content so as to determine what gaps exist which may hinder the achievement of all the specified behavioral objectives; to more clearly and compactly indicate the desired objectives; and to demonstrate the close relationship between behavioral aspect and the subject matter aspect of the program. This would be one way of reformulating the general goals in testable terms. For example, one specific behavioral objective may be to give an adult student in a history course the ability to interpret data; which may also be related to the broad general objectives of developing civic responsibility cited as one of the goals of adult education in California. This would mean that the student would be given an opportunity to deal with new data and an opportunity to practice in the interpretation of it. The end result would be the development of skill and understanding of some principles of interpretation of data that would extend beyond the confines of the course and subject matter into other areas. The focus here would then be on the development of insight and understanding rather than rote memorization of a particular interpretation.[19] Obviously, this skill and understanding will be extremely important in fulfilling many of the general objectives cited. It is only as objectives contain the behavioral and subject matter aspects that we can expect a clear indication of what our educational job must be. In this way, the teacher and administrator utilizes his specific objectives as criteria to select particular courses, content, methods, materials, and the steps needed to achieve the goals of the program.

The failure to supplement general goals with specific objectives pertinent to each local community and its adults results in the goals of a program serving no direct function of guiding the behavior of administrators and teachers in curriculum determination and development. Under such circumstances, the administrator operates in an expedient manner to offer courses that will attract enrollment, since the open-ended character of general goals, cited above, does not function to guide organizational behavior. The expedient type of adult school situation makes no effort to formulate specific objectives in contrast to the principled type which strives to supplement the general statewide goals of adult education with the necessary specific objectives required to guide the process of program development.[20]

In essence, the general objectives formulated for public school adult education in California, because of their open-ended character, are relatively ineffective unless they are supplemented by specific goals in the local school district. Without specificity in goal formulation, general objectives serve only as a rationale for the existence of public school adult education rather than to guide and control organizational behavior. An effective set of goals, both general and specific must serve the dual purpose of providing legitimacy for the organization and of guiding behavior.

Professional Standards

A code of ethics and professional standards are developed by a professional organization to meet recurrent problems in the relations of its members to one another, to their clientele, and to the public. They are intended to exercise control over the behavior of members of the profession. The California Association of Adult Education Administrators, in cooperation with the Bureau of Adult Education of the State Department of Education, has established a set of professional standards for adult education administrators.[21]

An important motive for developing this set of professional standards arose out of the criticism of adult education instigated by the California Senate Interim Committee on Adult Education in its investigation of public school adult programs.[22] By becoming more "professionalized," the administrators hoped to curtail criticism of their programs, for one asset of professionalism is functioning beyond external criticism. The expectation was that these standards would assist in aiding administrators to achieve stature professionally and thereby provide greater freedom from adverse judgments that question the worth of adult education.

To impose some enforcement power for conformity to these standards, the association requested the California Teachers Association to conduct investigations of reported unprofessional conduct by administrators.[23] The stated purpose of these standards is to strengthen the program of adult education in California. However, many administrators are so dependent on reacting to the pressures imposed upon them by their school districts and communities that they are not always able to act professionally. It is extemely difficult to discipline adult administrators for violation of standards when counter-pressures stimulating behavior that violates professional standards are beyond their control.

Consequently, while these professional standards do not serve as a means of control over the behavior of many adult administrators, particularly those operating in an expedient type of adult school situation, they represent an excellent summary of desirable administrative practices. The first section deals with standards for curriculum development, including the determination of needs, selection of courses, operation of classes, and evaluation. Under standards for professional relationships, there is guidance for establishing and maintaining relationships with other administrators, with teaching staff, with non-certificated staff members and with students, as well as advice on dealing with problems relating to plant, equipment, and supplies, establishing advisory committees, etc. The status of the administrator as a professional adult educator is also considered.[24]

An important purpose of these standards is to demonstrate to colleagues at other levels of education and to the public that the adult administrator is a member of a truly professional occupation. As schools approach the principled type of adult school situation, these professional standards will operate more effectively in determining and controlling administrative behavior.

Colleague Relationships

Within the occupation of public school adult administrator, colleagueship implies a deep relationship between individuals occupying these positions. This relationship is characterized by a strong sense of *esprit de corps* which conveys to its members a feeling of closeness and intimacy.[25] Since the adult administrator is typically a one-man administrative staff, the need for advice and counsel must be carried to colleagues in other school districts. Such advice and counsel tends to re-enforce appropriate behavior and to establish an informal code of behavior which serves to guide the activities of adult administrators. Colleague relationships also develop a set of common expectations about threats to the stability of adult programs from outside groups. Analysis of the criticisms and attacks upon public school adult education in California reveals that, during such periods, the administrators develop a high degree of solidarity and in-group feeling which unifies and strengthens the group in combatting its critics. A number of recent attacks upon adult education appear to have strengthened colleague relationships. One index of this deepened sense of colleagueship has been the increased willingness of administrators to volunteer for and work together on common projects under the leadership of the state-wide association.

There are a number of elements which have been identified as contributing to the building of a sense of colleagueship.[26] These are:

1. Ample provision for informal interaction among colleagues;
2. Periodic crisis periods to serve to solidify the colleague group;
3. The development of formal occupational organizations on a regional and state-wide basis;
4. Development of a concept of rendering important service to society;
5. Development of a code of professional standards;
6. Influencing the entry of new members.

Elements that operate in other occupations, but not relevant in adult education, are the tendency to develop distinctive ceremonial behavior and the effort to foster a limited supply of personnel for the occupation.[27] The six elements mentioned have been identified as operating in adult education, but the control of entry of new members is least operative. However, the professional association and individual adult administrators are continually seeking to influence school superintendents to select personnel with appropriate background and experience in adult education as a way of influencing the entry of new members.[28]

The sense of colleagueship is fostered most successfully by membership in the California Association of Adult Education Administrators. New members to the occupation are urged to join and to attend its regional and state-wide meetings. At the annual conference of the state association a section meeting is held to counsel and guide new administrators. To supplement these meetings, new administrators are encouraged to consult with more experienced administrators in finding solutions to problems that arise in their programs. Most adult administrators have reported that the most valuable assistance that they received in adjusting to their new positions was from "old hands" in nearby communities. The marginality of the adult education program, evident in its vulnerability to criticism and attack from within the public schools or from individuals and organized groups in the community, fosters the immediate acceptance of newcomers.[29] This acceptance, which materially advances the sense of colleagueship, is immediate lest the new administrators' errors may evoke criticism of their programs for this considered an attack upon the entire program of adult education.

The value of developing a strong sense of colleagueship is evident in its contribution to strengthening the group in dealing with critics of adult education. Colleagueship provides an important source of self-confidence in carrying out the duties of the position. Once a new administrator is fully accepted into a colleague relationship, he secures support and sources of assistance that enable him to carry out his duties more effectively. An obligation of membership also implies that the new colleague will not openly criticize other adult administrators. This obligation is usually interpreted as being professional or taking a professional attitude toward colleagues. As the adult education program becomes more secure, the ties of colleagueship will be strengthened to further stabilize public school adult education. This will tend to increase the prestige of adult education and result in an even greater professionalization of this position.

Other Controls

A prevailing characteristic of American education is local control. In this country, local control is frequently proclaimed as an important safeguard of educational freedom and of a free society. But this characterization is a myth, because local control invariably means that education is vulnerable to a wide variety of local pressures. And these pressures are exerted by a multitude of pressure groups which subscribe to education for the general welfare but which differ widely on how to achieve the general welfare.[30] Such pressures are an important source of control in adult education. Every adult educator must be alert to the existence of a multiplicity of special interest groups in every community for this is an era of voluntary associations, equating maturity and constructiveness with assertiveness, whether in the censorship of textbooks or complaining about the "frills" in the adult program. Such controls operate when people of similar interests band together to get what they want (or, often, to keep others from getting what they want). As a result, community groups impose controls over curriculum determination by the very nature of pressure upon the adult school for particular programs. Such groups may also be instrumental in eliminating program areas by critizing its legitimacy in the adult school.

The voluntary character of the student body in adult education is another important source of control over organizational behavior. A feature of adult school attendance is that this activity is usually a part-time interest of the adult, and inevitably secondary to other commitments, such as to an occupation, raising a family, social activities, active participation in community organizations, etc. While students above the compulsory attendance age are also free to withdraw from school, and in this sense are a voluntary student body, this problem of attendance is never as acute at other levels of education as it is in adult education. Here the competition for the available time of the adult, part-time commitment, and the voluntary character of attendance exaggerate the importance of the student body. Thus, the students determine the success or failure of a class or teacher by their willingness to attend. While the administrator may be able to offer any course or other activity that he feels is appropriate in fulfilling the goals of his program, the final determination of the success or failure of such activity will, in the last analysis, be decided by the students and their interest in attending or dropping out. Clark characterized this source of control as the concept of enrollment economy.[31] While Clark applied this concept to his analysis of public school adult education, it also characterizes day high school and junior college classes where minimum enrollment norms have been established to maximize state financial aid. This type of social control, although not unique to adult education as Clark asserts, tends to operate at all levels of public education where state aid is determined by enrollment. Some modification of the impact of the enrollment economy can be achieved by a more successful determination of student needs and interests in developing a program and by providing a very effective adult teaching staff.

Conclusions

This article is one of a series of occupational studies of positions in adult education. A major reason for undertaking these studies is to provide more understanding of the work of the professional adult educator.[32] We hope that the outcome of increased research of the occupational roles of adult educators is to improve the quality of professional training and raise the standards of adult education. There is a need for an increased emphasis upon research into problems in adult education if our field is to achieve its potential as the most important force for helping adults deal with their problems of living in a rapidly changing world.[33]

FOOTNOTES

[1] Louis Wirth, "The Problem of Minority Groups," in *The Science of Man in the World Crisis,* edited by Ralph Linton (New York: Columbia University Press, 1945), pp. 347-72 as quoted in *Community Life and Social Policy: Selected Papers by Louis Wirth* edited by E. W. Marvick and A. J. Reiss, Jr., (Chicago: University of Chicago Press, 1956), p. 255.

[2] A new regulation in the *Education Code* provides that no district can charge adults tuition that will exceed the cost of maintaining the class. Cf. *Education Code 9191* (Sacramento: State Department of Education, 1954). This regulation was instituted following the Senate Interim Committee investigation of adult education in the public schools which revealed that some districts were making a considerable profit from their adult education programs. Cf. *Partial Report of the Senate Interim Committee on Adult Education,* California Senate Resolution 185 (1951).

[3] Cf. James Armour Lindsay. *A Survey of the California Public Adult Education Program,* (Sacramento: State Department of Education, 1953), Memeographed. This report estimates that the average district contribution for adult education, for 1950-51, varied from 5.5 per cent to 79.3 per cent of the total cost, pp. 207-8. It is very difficult to estimate a desirable level for local support for adult education. The most important variable is the extent of taxable wealth within the boundaries of the school district. Thus, a poor district may secure a major part of the cost of its educational program from the state of California under the principle of equalization. In contrast, a wealthy district will contribute a higher percentage of educational costs from local funds. An appropriate principle to apply in adult education finance is that the adult program should receive an equivalent share of local resources in accord with the prevailing practice of other levels of education in the district. No local program of adult education can become secure and an integral part of education unless it receives adequate local financial support that demonstrates an equal share of the local district's resources.

[4] The State of California has a system of state aid for public education based upon a formula of average daily attendance recorded during the preceding year. The larger the attendance hours earned by adult education means that there will be less demand for local district funds to support adult education. Clark characterized this type of financial arrangement and source of pressure by the concept of enrollment economy. Cf. Burton R. Clark *Adult Education in Transition,* (Berkeley: University of California Press, 1956), pp. 61-63.

[5] *Handbook on Adult Education in California, Revised, 1957.* Bulletin of the California State Department of Education, Vol. XXVI, No. 12, November, 1957, p. 5.

[6] While a basic principle of adult education is to meet the needs of adults where they are, these are not just "felt needs" of the participants but also the needs which the adult educators impute when they view the gap between what is and what could be if their adult participants achieved their full potential.

[7] *Handbook, op cit.*, p. 58.

[8] Jack London, "The Career of the Public School Adult Administrator," *Adult Education,* Volume X, No. 1, Autumn. 1959, pp. 3-11.

[9] Robert Redfield, *The Educational Experience,* (Pasadena: The Fund for Adult Education, 1955.)

[10] Jack London, "Program Development in Adult Education," *Handbook of Adult Education in the United States,* ed. by Malcolm S. Knowles (Chicago: Adult Education Association of the U.S.A., 1960), Chapter 6, pp. 65-81.

[11] *Liberal Education in a Technical Age,*(London: Max Parrish, 1955) and A. N. Whitehead, *The Aims of Education,* (New York: Macmillan Co., 1929–Mentor edition, 1949), p. 58.

[12] The concept of life-long learning is used here to signify that adults must strive to be learners over the life span. The primary goal of adult education should be to help adults become their own educators, with the ability to organize a program of education to fill their own needs and interests. Thus, the ultimate aim of an adult school is to prepare students to stop attending classes except when a special need or interest arises for which a course, lecture series, debate, or other activity may be helpful. While the function of adult education, from a remedial point of view, is to correct the inadequacy of educational preparation, of even greater importance is the need to provide educational experiences to enable an adult to meet his own problems and the problems of his age in a rapidly changing world. Cf. John S. Diekhoff, *The Domain of the Faculty,* (New York: Harper & Bros., 1956), pp. 134-153 for an extended discussion of this thesis.

[13] *Professional Standards for Adult Education Administrators,* Bulletin of the California State Department of Education, (Sacramento: State Department of Education, November, 1955), Vol. XXIV, No. 16

[14] *Handbook on Adult Education in California,* Bulletin of the State Department of Education, (Sacramento: State Department of Education, May, 1949), Vol. XVIII, No. 4, p. 13.

[15] *Handbook. . .revised edition, op. cit.,* p. 2.

[16] Clark, *op. cit.,* pp. 63-66.

[17] London, "Program Development in Adult Education," *op cit.*

[18] Ralph W. Tyler, *Basic Principles of Curriculum and Instruction,* (Chicago: The University of Chicago Press, 1950), p. 32.

[19] Robert Ezra Park, "A Memorandum on Rote Learning," *American Journal of Sociology,* Vol. XLIII (July, 1937), pp. 23-66.

[20] London, "Program Development in Adult Education," *op cit.*

[21] *Professional Standards. . ., op cit.*

[22] *Partial Report. . ., op cit.*

[23] *Professional Standards. . ., op cit.,* p. 1.

[24] *Ibid.,* pp. 2-19.

[25] Herbert G. Blumer, "Social Movements," *Principles of Sociology* edited by Alfred M. Lee, chap. 22, (New York: Barnes & Noble, 1955), pp. 205-7.

[26] Edward Gross, *Work and Society,* (New York: Thomas Y. Crowell, 1958), pp. 223-235.

[27] *Ibid.*

[28] Lieberman contends that teaching will never become a profession until teachers are able to control entry to their occupation. Myron Lieberman, *The Future of Public Education,* (Chicago: The University of Chicago Press, 1960), p. 105.

[29] Clark, *op cit.,* pp. 57-60.

[30] Myron Lieberman, "Four Myths Cripple Our Schools," *The Nation* (February 28, 1959), pp. 179-180.

[31] Clark, *op cit.*, pp. 61-63.

[32] Jack London, "Problems of the Adult Administrator: A Study of the Work of the PUblic School Adult Administrator in California," *Adult Education* (Summer, 1959), Vol. IX. No. 4, pp. 222-231.

[33] Cf. Edmund deS. Brunner, et al., *An Overview of Adult Education Research*, (Chicago: Adult Education Association at the U.S.A., 1959).

DIFFERENCES BETWEEN ADULTS AND YOUTH AFFECTING LEARNING

Jane C. Zahn

Adults are not merely tall children. They differ from the young in many ways that influence their learning. They have different body characteristics, different learning histories, different reaction speed, different attitudes, values, interests, motivations and personality. Therefore, those who are trying to help adults learn must be aware of these differences and adjust teaching and the learning environment accordingly.

More and more research shows that the basic ability to learn changes little, if at all, with age. Such changes as so occur as people grow older are not changes in the ability to learn but changes in physical state, including disease, and changes in attention, motivation and ways of viewing experience.

Difficulty of Research

Most children spend many hours a day in school where individual records are kept. Adults learn in many places, usually where few records are kept. Adults learn on the job, at home, with friends, in informal groups, in churches, in unions and professional associations, through the mass media and in school situations. No place exists in American communities where all adults assemble daily to learn and where their learning can be observed and measured; in most American communities all children except the seriously handicapped do assemble in such a place. Children's learning is comparatively easy to study and measure; adults' learning is comparatively difficult.

In 1963, the U.S. Department of Labor studied worker retraining.[1] Only four companies out of 100 kept records of employees' performance during retraining, had both older and younger workers and knew how much formal schooling each

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worker had completed. In Thorndike's famous study of learning in 1928,[2] the adults studied were university students and their wives, not a typical cross section of the population.

One of the difficulties facing most researchers who compare adults with youth is that it takes less time and money to compare young people and older people during the same period of time. Results of such a study can be reported and used in a very short time. The difficulty of this cross-sectional approach is that society is changing so rapidly that generations cannot be compared. For example, in the United States at the present time, 66% of those between 65 and 69 years of age have no more than an eighth grade schooling. Among the group just reaching 18, only 11% had eight years of schooling or less. We have evidence that education does influence the ability to learn; therefore these two groups cannot be compared. More meaningful comparisons come from those studies that inquire into the changes of the same people as they grow older. Some of these longitudinal studies have been done, requiring a great deal of time, expense and patience. Their results are quite different from the results of studies which compare adults and younger people at the same time. In such cross-sectional studies, decline in intelligence is observed as age increases. In longitudinal studies where the same people are tested again years later, intelligence does not decline with age, and in some cases intelligence increases with age.

Speed

Speed of performance and speed of reaction time tend to decline with age. Purely physical speed of reaction slows as people grow older. Botwinick and Kornetsky[3] compared the skin response of older and younger adults to an electric shock and to a pleasant musical tone. The skins of the older group responded to the shock less quickly than the skins of the younger group and responded to the pleasant tone less quickly also. The older people did not react as quickly as the younger. The slower speed of reaction may be a result of living longer, being exposed to more shocks and pleasant tones, and therefore being less stimulated by them; or the slower speed of skin reaction may be the result of a slower functioning of the nervous system that occurs with aging.

In 1962, Brinley[4] studied how age affected speed of performance on 21 speed tests. Some of the tasks were alternating ones; the subjects were asked to alternate between one task and the other. Other tasks were "straight" tasks––pursuing again and again one kind of operation. The older subjects (59-89 years) took more time than the younger subjects (18-36 years) on the shift tasks. However, they also took longer to perform the non-shift tasks.

In older people, those who are most accurate are also the fastest. This is not true for young people, who may be accurate and slow, accurate and fast, inaccurate and slow or inaccurate and fast. Birren and others[5] in 1962 observed this general speed associated with accuracy in older but not in younger subjects.

Goldfarb[6] chose a special group of subjects between 18 and 65 who were above average in intelligence and who had more than the average of formal schooling. He found physical reaction time of men to be quicker than that of women but that the speed of reaction slowed with age. He also found that age brought a greater discrimination of reaction and increasing variability; younger people were more alike in the speed of reactions; as age increased, differences in reacting time increased. This was also true for discrimination. Although the average sixty-year-old reacted more slowly than the average younger person, individuals of sixty reacted much faster or much slower than the average of those aged sixty. This was less and less true the younger the group.

When Wechsler[7] studied adult intelligence, he found a decline with age in those abilities most heavily dependent upon speed of performance. Those portions of his tests which depend on use of words and drawing on experience showed little decline.

Thorndike Study

In 1928, Edward L Thorndike's book, *Adult Learning,*[2] was published. Thorndike had given many different tasks to men and women from fourteen to fifty years old in a careful, well-thought-out series of experiments. Thorndike's work was the first scientific study of adult learning. The study was a cross-sectional one, comparing adults with young people during the same period of time.

Thorndike was more interested in how fast adults learned than in how much they learned. He measured how fast right-handed adults could learn to write with the left hand, how fast adults could decipher and use a code and how fast they could learn and use an artificial language. In the coding experiment, after eight three-minute practice periods, the students 20-24 years could decode five more letters than the oldest students; however, the oldest students decoded 23 letters at the end of the practice. They had learned the task, they were able to do what was asked, but they were not able to do it as fast as the younger students. From these experiments, Thorndike drew up a curve describing what he called "the ability to learn in relation to age." This curve is not correctly named. The curve describes not the ability to learn but the ability to learn and perform artificial tasks in a given period of time. Thorndike's oldest group averaged 42 years of age. They performed as fast as the 18-year-olds but 15% slower than those in their early 20's. The speed of performance declined a little less than 1% a year.

Intelligence

Whenever learning ability is measured without strict time limits, learning ability does not decline between twenty and sixty years of age. Those who were bright at twenty do not become dull at sixty; nor do dull young people become moronic older people. At sixty a person can learn the same kinds of knowledge and skill that he could at twenty.

From age twenty to age fifty a person does not decline in ability to learn or in intelligence. His actual performance on tasks may be less because of lower motivation, speed, his idea about himself or a decline in vision and hearing. Merely growing older does little to change his ability to learn or think. Growing older does bring different values, goals, responsibilities and self-images. Such changes along with physical changes may affect speed but not ability. Adults often learn less than they might; this is partly because they are usually too modest about their own wisdom and ability and partly because of their sensitivity to unfavorable criticism. Failure to continue to learn may affect their learning more than their ability to learn.

Tests

When tests are given at the same time to younger and older people, improvements or declines with age depend on the type of tests given. Tests such as vocabulary tests which allow for accumulated experience show improvement with age. Those measuring perception and dexterity show a decline with age. In 1961, Birren and Morrison[8] analyzed the different tests within the Wechsler Adult Intelligence Scale for 933 native-born Americans, age 25-64 years. They found that the number of years of formal schooling completed to be a much better predictor of good performance on the tests than age. However, on the whole, information and vocabulary tests showed an increase of performance with age; arithmetic figures and picture arrangements showed a decrease, as those tested were older. Although mental ability does not decrease with age, the pattern of abilities does.

Reigel[9] gave purely verbal tests to those of different ages. He found that older people could select synonyms better but could select appropriate words less well. Again, ability to deal with words does not decline with age, but the pattern of using words well changes.

The number of years of formal schooling influences performance on intelligence tests much more than age does. This finding from many studies emphasizes the difficulty of comparing older people with less education to younger people with more. Lorge[10] showed this in 1941, when he studied a group of boys who had been tested in 1921 in the eighth grade. In 1941 those boys who had completed formal schooling did better on the tests than boys of the same intelligence who dropped out of school after the eighth grade.

The level of education completed is determined by many factors in the society, even geography. For example, the armed forces of the United States reject from two to six times as many men from the southeast and southwest for illiteracy and mental deficiency as from the northern areas. Intelligence tests may not measure variations in intelligence, but rather differences in the ideas people have about the function of education is in later life.

Effect of Health

Health affects performance on intelligence tests. This relationship was shown in the results of a study at the National Institute of Mental Health.[11] The researchers compared men in their 70's who were healthy with others who had some type of disease. On the verbal tests, where older adults usually do better than younger people, the older men with a disease did only as well as younger people, while the healthy older men performed much better than younger ones. Patients with high blood pressure are slower in both physical and mental responses than healthy people of the same age. Obrist, *et al.*[12] in 1962 found no relationship between age and intelligence tests performance but did discover that regardless of age, those with abnormal electroencephalograms (an indication of physical brain difficulty) performed much less well on intelligence tests.

We must conclude from the research done so far that adult mental ability declines if measured by some types of tests, increases if measured by others. If the mental ability test requires the use of experience, practice and judgment, the scores of older people go up. If the tests require speed or completely new and unusual tasks, the scores of older people go down. However, the scores of well-educated, healthy older people are higher than scores of younger people and are higher than their own scores at an earlier age. An older person's ability to perform well on an intelligence tests depends on the type of test it is, his health and his former education, not his age.

Physical Differences

Many research studies as well as common experience bring overwhelming evidence that certain physical abilities decline with age and that physical changes easy to see occur. Eidetic imagery, the ability to see pages, paragraphs or sentences complete in the mind's eye, is at its height in the early teens and declines steadily thereafter, making the task of memorizing more difficult. Physical reaction time slows with age. Keenness of hearing also declines as a person grows older.

Much research suggests that after the 40's most people work at a slower pace. They maintain a pace that gives constant performance with less stress and strain. This lessened speed of reaction probably explains the slower rate of learning of older adults but does not mean their ability to learn is less.

As people grow older, their acuteness of hearing goes down as well as their speed of hearing. In contrast to most physical traits, acuteness of hearing is the highest between ten and fourteen years. After age fifteen, the percent of the deaf and hard of hearing increases. When people lose their acuteness of hearing, they also lose speed of hearing. The older a person is, the longer it will take him to hear a message. Because an older person cannot hear as well, his idea of himself is sometimes damaged, and he may develop unpleasant personality quirks.

Sight also declines with age. Keenness of sight is best in the late teens or early 20's. After the early 20's sight declines slowly to the middle 40's, when bifocal vision appears. With the decline in keenness of sight goes a decline in speed of sight. Seeing takes time. The time needed to shift from seeing something close at hand to something far away and back goes up as a person grows older.

The physical signs of aging, such as gray hair, dimmer sight and wrinkles, reinforce sterotypes older people have about themselves. Stereotypes about older people that interfere with their ability to learn are so strong that strenuous efforts with individuals to look at the evidence rather than at the stereotype have not been very fruitful.

Behavior Already Learned

Learning is changing behavior; if a person changed his behavior very easily and quickly, responding to every experience, very little would be learned lastingly. On the other hand, if a person resisted any change in his behavior, responding slowly to new experiences, very little would be learned at all. As educators, we are interested in changing behavior through giving new experiences while retaining the advantages of stability. We value certain behavior in learners and want that behavior to be lasting; at the same time we hope that behavior we do not admire is open to rapid change. Older adults have already learned social skills, vocabulary, values and attitudes which remain quite stable; a child changes his behavior more quickly and easily, not having learned so much.

Years of job experience may make it more difficult for a worker to learn a new skill related to the same job. His old habits and attitudes have been well learned, and they will interfere with the new learning. Much of the learned experience and habits will be meaningless in the new learning situation. The greater the experience a person has had, the more the past will probably interfere with the present, especially if the present is different, but not too different, from the past. It is easier for an experienced person to learn a completely new task than to learn to do a familiar task in a new way. In trying to do a familiar task differently, old habits interfere more often.

The way in which a person organizes his perceptions, as well as what he selects to perceive, is influenced by what he expects; and what he expects depends on his experience and his motives. It is more difficult to change the perceptions of an adult than of a child because the adult has had more prior experience.

Relearning

On the other hand, the more time elapsed since an experience, the harder it is to remember. If an adult learns certain skills as a child and then has a long period when he does not use these skills, he will have more difficulty than a child in "brushing up" on those things learned long ago but now forgotten. However, those materials once learned and now forgotten can be relearned with less effort than it took to learn them in the first place. Therefore, an adult relearns most easily that which he learned earlier and not too long ago. He can relearn any material easier than he can learn new material, but it will be harder for him the longer the time since he first learned it.

Adults change the past in their memories; children do, also, but they do not have much past to change. Adults remember the past as more simple, more consistent and more stable than it actually was; they remember the past in the way that, looking back, they would expect it to be; and in part they remember what they want to remember and they distort the memory somewhat in the direction of their wishes.

Problems are difficult to solve when they require the use of the familiar in an unfamiliar way. The more recently an object has been used in a familiar way, the more difficult it is to think of using it in a novel way. Therefore, experienced adults have more difficulty than young people in solving problems involving new uses of familiar materials, habits or skills. Solutions to problems used in one situation get in the way of discovering different approaches when the situation changes. Solutions or principles that have worked in one situation may get in the way when they are not appropriate to a similar situation. Previous opinions or biases can affect conclusions supposedly arrived at logically. An adult has great difficulty accepting logical conclusions from evidence if the conclusions fly in the face of some deeply held value or belief.

Learning Expectation

One habit developed by adults may be that of expecting to learn. The adult with more education has learned how to learn: he approaches a new situation with a learning strategy in his mind, and he expects to be able to learn. The number of years since formal schooling may weaken the habit of learning and of expecting to learn.

Adults are less easily changed than children because they have already learned so much. Old habits and attitudes may interfere with new learning. However, if they learned how to learn when young and continued their learning during adulthood, the habit of learning is so strong and the strategy of learning so well developed that learned new material will be even easier for them than for children. The difficulties arise when they must unlearn old habits and attitudes, when they did not learn how to learn as children or when many years have gone by since their last learning experience.

Values, Interests, Personality

Adults have different values, interests and personality traits than youth has, and their concerns and dispositions tend to be more stable. They are more expressive, more expansive and more outgoing. The high anxiety of youth is moderated by greater feelings of autonomy, of competence, and of stability. Adult moods are more even, as they have learned impulse control and have a more unified identity. Sanford[13] discovered this when he studied students at Vassar College from their freshman year through several years after graduation. During the college years he found a greater complexity of personality that became stabilized after graduation. Several years after graduating from college, the young women studied had changed only in greater freedom from anxiety, greater sense of well-being and more stability. Willoughby[14] found a drop in emotionality and mental stress from youth to age, and Catell[15] found a steady increase in psychological adjustment with age. Personality of adults is more difficult to change because it is more stable, but it is surely easier to teach those with less anxiety and a greater sense of well-being.

The opinions, attitudes and beliefs of adults are more firmly fixed and often more dogmatic. In 1939 Lorge[16] found more firmly fixed attitudes in older adults than in a group of equally intelligent young people.

As Gardner Murphy[17] has stated, adults have more emotions involved in most groups of facts than do children, we often assume they have fewer emotions involved because adults have learned to control the expression of their feelings more carefully. One example is the common fear of any group of adults that they might not have the "right" or approved feeling, tastes or values.

A child has had so little experience that he has few ideas about what he can hope to do or to accomplish. An adult has a large reservoir of past experience which has shaped his ideas of what he can do. This experience helps the adult not to set unrealistic goals for himself; however, his past experience may have been so negative, unfortunate or irrelevant that he may underestimate his ability to attain a goal.

Studies by Strong,[18] Davis,[19] and others show that children's interests change more often than the interests of adults and that adults have different interests. As people grow older, they become less interested in jobs or hobbies that require physical skill and daring, but become more interested in reading, writing, music and other sedentary interests. For this reason, it may be more difficult to teach skiing to an adult but easier to teach him literature, creative writing, or music appreciation if for no other reason than that his interests are stronger in areas that require less physical skill and risk.

The child's attitudes and opinions about economics and politics are determined almost completely by the attitudes of his parents. An adult's attitudes are also influenced by those of his parents but are shaped as well by the attitudes of the majority of his community and by new ways of life, new social groups and new communities he becomes a part of. Although an adult's attitudes are more stable and more emotionally charged than the attitudes of youth, they are influenced by more factors.

Fixed Attitudes

Interests, attitudes, concepts and values do become more fixed with age. The longer interests are held, the more familiar they become and the more they are overlearned. Interests of youth and young adults change more than those of older people; attitudes of older people are more stable. This very stability of concepts makes for the "resistance to change" so often reported as a negative factor in aging. Adults whose youth was spent in a different social, technological and cultural environment may have interests not suited to present intellectual, social and practical affairs. Because of their education and experience in youth, adults may have attitudes that interfere with realistic adjustment of older concepts. Adult interests, however, do change inasmuch as they become less interested in activities demanding physical prowess. Interests basic to adult education, such as reading, writing and music, become more intense. Adults can learn and be taught new interests, especially if they have moved to a new community, taken on a new job or assumed new family responsibilities.

For learning purposes, the most damaging attitude an adult can have is a negative one toward schooling, held over from childhood. The adult may remember school as an unpleasant place where difficult tasks were given, where he was forced to study what he disliked and where his mistakes were ridiculed. If he has such memories, he will feel insecure in a school setting. He may fear sarcasm, frustration or failure. If so, he will avoid a learning situation and have very little confidence in his own ability to learn.

Methods Of Teaching Adults

Adults are not children. Methods successful in teaching the young cannot be transferred without change to teaching adults.

Adults are not as fast as children. They do not see, hear or react as quickly. The teacher of adults should speak more slowly, clearly and loudly. He must allow more time to take notes from the blackboard. More light, a quieter room, more warmth are necessary for adults to learn well. All adults in a room should be able to see the teacher talk; for as adults grow older, they learn, without realizing it, to depend more and more on help from lip-reading, facial expressions and gestures. The teacher should not turn his back to his adult students nor move out of sight. Unusual words, new names, strange expressions should be written out for adults to help clarify spoken words. The scope of the lessons should be planned to allow for the slower speed of adults. Speed of performance should be thought of not only in the classroom but also in outside assignments. The adult can do all that youth can do, but usually it will take him a little longer.

Adults learn more and more quickly than children if the learning is based on their past experience. They learn better the better their health and the more their previous education. Teachers of children have difficulty basing learning on a child's experience, as he has had so little. Teachers of adults have an invaluable resource in the past experience of adults. The adult relearns easily what he has once learned, especially if the time since he learned it is not very long. The more the teacher of adults can base his teaching upon previous experience, the better and faster the adult will learn. The teacher should urge the adult to relate new or abstract concepts to his own experience and to use the past to help himself with the present and the future.

However, an adult's past experience can be a handicap to learning. The two easiest ideas or tasks to teach an adult are concepts, ideas or tasks he has learned before but partly forgotten and new material relevant to this past experience. The most difficult task for an adult is to learn to do a familiar task in an unfamiliar way or to view a deeply-valued concept in a new light.

In this situation, his past experience, instead of helping him, interferes with his learning. Those teachers who have the job of teaching an adult to change old habits of performing or old ways of thinking about meaningful material will need patience to allow for the extra time and extra teaching skill necessary.

Satisfaction And Reward

Planning successfully for adult learning means using the past of the adult constructively to give him a sense of mastery and success. For adults, learning proceeds faster and more effectively when satisfaction and reward occur during the process. Punishments slow up the learning of the adult more than of the child. The adult's dignity is at stake. He sees humiliation and failure as an affront to his self-esteem. A teacher of adults must use rewards more often than punishment and must minimize, although not ignore, error. Attitudes can be changed through rewards, through showing progress, through giving opportunities for mastery. An adult fears unpleasant attention and comments when he makes a mistake. An adult is much more fearful than a child of "making a fool of myself in front of all those people."

The teacher of adults should not act as if he were teaching children. His challenge is to teach those who, though slower physically, are more deeply interested, who come to him with a great amount of stored knowledge and experience that can both help and hinder him, who are less changeable but more varied and wiser. He works with those who are not only capable of influencing the future but also able to change the present. Adults are the workers, parents and shpers of a nation. To teach such as these is an honor and an ever-new challenge that calls for the highest abilities of the teaching profession.

FOOTNOTES

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THE SOCIOLOGY OF EXCLUSION: IMPLICATIONS FOR TEACHING ADULT ILLITERATES*

R. L. Derbyshire

Continent's End. Land's. End. Jumping off place. The Place of New Beginnings. Turning-Point; Turn-Table.

Say, Hey!. . .again Civilization follows Commerce. . . Culture follows trade. . .Westward. . .

We're going to build a bridge--road to Mandalay. . .finish Columbus's chore. . . . . .come full circle. . .("more than passage to India!". . .Walt Whitman. . .)

. . .Psycheosmosophically, Oriocciental Psychocosmic Psycholpsychiartrist, or/and Occioriental Psychocosmik Psycholphilosopher, and/or Orioccidental Psychcosmique Psycholwholist, and/or Oxioriental Psychocozmic Psycholsociologist, and/or Orioxiental Psychcosmik Psycheemergentevolutionist, or/and Occioriental Psychocozmique-Psych + Cosmos= Extrametaultrasuprasupperreality - transcendental psychocosmiconsciousness - man. per: Oxioxidental Psychkosmik (World's Fair Committee, c/o: The Mayor City Hall, 94102, San Francisco!!!!!!!! California!!!!!! (after all, if Oklahoma! rates one!)

The above letter was written by a patient labeled as schizophrenic. Unless one can understand and perceive this patient's experiences, his message is incoherent. Until teachers of adult illiterates can view the illiterate's world and experiences through his eyes, the educator's teachings will be irrelevant.

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Cultural Exclusion[1]

What does it mean to be left-out? Remember for a moment the games of our adolescence. In every gang or group there were always children whom neither side wanted. "He can't hit--who wants him; he always drops the ball;–she can't throw hard enough," etc. If one was fortunate enough not have been one of these misfits of youthful games, stop for a moment and conjure the feeling that must have been associated with this type of rejection.

Exclusion from peer relations under game conditions is transitory and based upon one's inadequate performance. Improving one's performance or waiting until human growth and development patterns exclude game proficiency as a prerequisite for peer group inclusion is an institutionalized means of becoming included. Another possible solution is to reject the excluded peer group and join another whose entrance requirements more readily fit the individual's capabilities.

Exclusion without concomitant social and psychological problems is difficult for most persons. Permanent exclusion is based on where one finds oneself in the social structure. Potential for improvement is limited. Exclusion cuts off the institutionalized avenues leading to success. This inhibits learning, accurate perception, attitude formation, and integrating items of social significance to the middle class, powerholding community. The "unlearned," the "unmotivated," those whose perceptions do not permit an orientation past the here and now, those whose attitudes are frequently classed by the dominant society as "immoral," and those whose socialized behavior does not meet the standards of the majority group–these are the excluded.

To exclude means to shut out. Persons who are barred from participation in the culture represent the excluded. Exclusion implies setting up a barrier effective in keeping out a person or class of persons from what is open and accessible to others.

Most frequently, the excluded are members of national, racial and cultural minorities. These include American Indians, Mexican-Americans, European immigrant categories, American Negroes, Puerto Ricans and Oriental migrants. Minorities are persons who lack access to community sources of power. Aside from these racial and ethnic minorities is a large category of social minorities; these include the unskilled, the unschooled, the unemployed and the transient. There is much overlapping, because minorities are not mutually exclusive categories. Concomitant with large populations of racial and ethnic minorities are excesses of the unschooled, unskilled and unemployed.

Adults illiterates are members of the large category of social minorities, many of whom have a social, cultural, or racial background compounding the illiteracy problem.

American Values[2]

Americans, generally, whether they represent the excluded or not, hold in high regard a relatively common set of values. The realization of these values is outside the experience of most excluded persons.

An important pair of American values is achievement and success. Culturally excluded individuals seldom taste success or achievement. Achievement comes in many forms, i.e., education, financial success, occupational advancement, family status, etc. The political, economic, educational and religious systems have inadvertently and purposefully blocked the avenues of achievement and success for most excluded persons.

Another set of values is activity and work. To be occupied at all times is necessary, expected and demanded. "Idle hands are the devil's playthings." If one is not working then he is loafing. Unskilled and unschooled minorities are more frequently unemployed than employed. Seldom are the culturally excluded in the unemployed position by choice, but by necessity.

Efficiency and practicality are beliefs held by most Americans. The best way to do things is the practical way. Persons who do not succeed economically, or who hide themselves in "ivory towers" aren't "down to earth"; don't have "their feet on the ground," and are not "practical." Members of the lower class desire, as much as anyone else, to be practical and efficient. Although practicality and efficiency may be lacking in terms of middle class American functioning, the culturally excluded are practical in terms of their necessities for living.

Progress, freedom and equality are other aspects of the

American value system seldom experienced by the culturally excluded. Access to the sales pitch for material comforts without gaining them, frequently stimulates inactivity, lethargy and retards motivation.

Institutional contacts reinforce these values. Excessive failure and constant frustration while trying to obtain access to these values does not necessarily decrease the value's importance, but it significantly stifles motivation.

The Educational Institution

Adult illiterates, an example of the excluded, hold values and have needs no different in kind, but possible in degree, than other members of the society. These persons have been excluded from most institutional life in the society. Of particular necessity is their inclusion in the educational institution.

Until the adult illiterate gets an adequate educational program, he will have been through a long process of exclusion from education. Although educators and the educational system may disagree, these persons were unable to conform to the institution as it was, therefore, the institution rejected them. It essentially said, "We don't want him on our team because he can't play well enough." If the illiterate has been unable to conform to the systme, then it is now time for the system to conform to the illiterate.

This statement is not meant to assign blame nor to excuse; it only states the need for a dramatic reorientation of institutional methods to fit the needs of all the people it serves. Lip service is no longer sufficient. The well worn cliche "meeting individual needs" must now become a dynamic reality.

Possibly our educational institution should take lessons from the economic institution. The need for hula-hoops and new automobiles is created by American advertising industry, and the same industry makes it virtually possible for most everyone to own them (even those who are considered at the poverty level).

Illiterates' Socio-cultural History

If the adult illiterate is to be aided, his familial, social and cultural background must be understood. He generally belongs to a large family, with five to eight siblings. Social control and child rearing are a function of older siblings. Parents are poor and because they are employed or looking for work, they provide little or no supervision. In these families parents are poorly educated, use little or no sentence structure, have a small vocabulary and are non-readers.

The majority of communication in these families is non-verbal, expressive and explosive. They learn to "read each other" less by what is spoken, but more by motions and gestures (i.e., the way eyebrows are slanted and the forehead is wrinkled, the way one smiles and doesn't smile, the way a hand is raised). Most frequently communication is non-verbal, therefore grunts and groans become important. "Expressive" means that persons in these families indicate their feelings in a non-verbal or verbal manner, but emotionality is more significant. By "explosive" it is meant that communication will usually be erratic, from the navel and not highly intellectualized, socially appropriate (by middle class standards) response.

Lethargy And Independence

These parents and middle class mothers and fathers have the same aspirations for their children. Lethargy develops, due to exclusion and multiple failures, as a personality syndrome which is passed from generation to generation. Each generation tries to succeed–cannot, and more lethargy sets in.

Forced independence at an early age is also characteristic. In order to survive in this type of family one must become independent; one must be able to stand on his feet in order to fight the world or passively exist. In this family, children are taught, and expected to be, physically aggressive.

The culturally excluded family, similar to other families, selects for transmission to the child, only those items in the environment which it feels are necessary for survival. It interprets and evaluates what is transmitted. Values of right and wrong, and good and bad are established at this time.

In terms of his cultural background, uneducated and unschooled persons desire many middle class goals, but lack the institutionalized means for obtaining them.[4] If one lives in a given culture, he assimilates the needs and desires of the culture. The society also provides institutionalized methods for obtaining goals. For example, when one wants to become successful and achieve, one institutionalized method is education. However, in culturally excluded families, education is not reinforced from day to day. Since parents have had little or no experience or contact with formal educational institutions, they have had no access to institutionalized means of obtaining an education. Education is desirable to the degree that these parents verbalize, "I'd like my son to go to school and become a doctor." But mom and dad do not have available to them the psychological supports or knowledge of the avenues by which the educational maze is successfully conquered. Verbal desires for education are present, but the necessary emotional and intellectual superstructure are insufficient. Therefore, if one wants to become a success in the lower class community (and education is the method, but unavailable) one chooses a non-institutionalized means of obtaining it. This may be the numbers racket or some other marginal or criminal activity.

Present Orientation

Present orientation is the cultural background of the excluded. They live for today and not tomorrow. It is the middle class person who lives for tomorrow. Thirty to forty-year mortgages are significant indications of middle class future orientation. Renting on a weekly basis exemplifies the present orientation of the lower class.

Cultural conflicts are created by differences between middle and lower class values. Successful, adaptive ways of behaving in the ghetto are functional for survival. These are frequently in conflict with middle class behavior and beliefs. For example, if the only way a 14 year-old female can maintain male friendship is through having sexual relations, then she will participate in that type of behavior. This behavior according to the middle class culture is immoral and wrong, but for these persons it is a successfully adaptive mechanism for personality integration and group identification.

Personality Traits

As a result of being reared in a family, society and culture of this type, a modal set of behaviors is identifiable. Adult illiterates manifest, to a relatively high degree, a number of personality traits resulting from growth and development outside of middle class practices.

One of these is insecurity. Adult illiterates frequently display insecurity by boisterous and acting-out behavior and an unwillingness to admit when they are wrong. When one is insecure, cognitive behavior is retarded because defensiveness and behavior justification become important. Another characteristic is physical aggression. When one perceives his behavior as too inadequate to join the educational team, then he joins the other side, the physically aggressive. These persons also recognize their lack of status. They have little education and money, poor occupations and inadequate social position.

Reticence is another major characteristic of adult illiterates. There is difficulty in speaking out, regarding one's own needs, except on occasion and in an explosive, erratic and self-destructive manner. A frequent verbalized attitude concerning their plight is "Well, you know, this is life," or "This is the way it is." These are frequent responses when interviewing lower class persons. Reticence becomes exaggerated when educational and occupational exclusion is compounded by minority, racial or ethnic identification.

When interviewing lower class Negro males in Baltimore,[4] a question always asked was, "Have you had any racial difficulties in Baltimore?" (Any Negro who has lived in Baltimore, a culturally southern, border city, knows it has been and still is impossible to live there without contacting some racial conflict.) A characteristic response to this question was, "No, it never happens to me,–I never have any trouble that way." A frequent response to the question, "Have you ever had any trouble with white people?" was "Oh no, white people are nice people." When asked, "Well, have you ever been on a bus and had someone nudge you and say, 'Get over there, black man'?" the most characteristic answer was, "Oh yes, I've had that happen, but I don't pay that no mind." This complete reticence to speak out for one's personal identity and self-respect and a denial of psychological and social conflict has been a functional and a necessary survival mechanism for lower class culturally excluded persons.

Lack Of Motivation

A fourth personality characteristic is resignation or what appears to be lethargy or lack of motivation. Culturally excluded persons are frequently resigned to their station in life. They feel it is impossible to be mobile, therefore why bother to try. Feeling exploited is also experienced. They smile while being taken for a sucker. Yet, under their breath anger, hostility, and aggression are subdued.[5] A young Negro stated during an interview, "I like your people, I worked for them." When I asked, "Who are my people?" he responded, "Jews, of course." In the lower class Negro ghetto of Baltimore, neighborhood stores, apartments, flats and rooms are owned by middle class Jewish persons. Lower class Negroes during interviews frequently displayed unleashed anger, resentment and hostility toward the Jewish entrepreneur who, they believed, was exploiting them.[6] Conversations among lower class persons reveal anger due to exploition of this nature, but to acknowledge these feelings to the middle class world is difficult.

These persons know they are being exploited. For example, in Baltimore one can rent a lovely hovel for $17 to $27 a week. Such a three room flat has one cold water faucet, a non-functioning toilet filled with excrement, obnoxious odors and rats, cockroaches and other vermin who have freedom of the premises. Since many of the families who live in these conditions are on welfare rolls, they see the welfare system agreeing to keep hovels of this nature in existence. Diffuse and unexpressed anger is seldom overtly or consciously directed at the entrepreneur and welfare exploiting system. Escape from these conditions is impossible due to lack of information, finances, education and stability.

Non-verbal Cues

Another major personality characteristic is extreme sensitivity to the non-verbal cues of those in power. In order to survive, culturally excluded persons have had to depend more upon how a person appears, rather than what he says. It has become functional to filter out what is said and judge a man on his actions. School teachers, due to their middle class heritage, lack of lower class interaction and understanding, demand for support of the status quo, and denial of lower class culture, frequently relate one message verbally while simultaneously non-verbally communicating the opposite. The non-verbal message is received loud and clear, while the verbal resounds only to the speaker. Since response is to non-verbal cues, behavior frequently does not comply to middle class standards and suggestions.

The small child, from a lower class hovel, who comes into the classroom with an odor of urine and feces will receive a non-verbal cue from the teacher. This is frequently a turned-up nose, frown or "ugh." Such a message creates a feeling not easily compensated by the teacher's health lesson explaining the proper use of soap and water. Its use and necessity are as foreign to this young man as the stench is to this young woman who is teaching.

Alienation of the culturally excluded by teachers can be easy, unconscious and frequently non-verbal. Interestingly enough, middle class persons are seldom as sensitive to non-verbal cues. They are less important as indicators of feelings and behavior. Non-verbal cues are distributed by middle class persons without realizing their importance to lower class persons who better understand gestures than words.

Another major personality trait of the lower classes is concrete rather than abstract thinking. If educational progress is to be made with adult illiterates, concrete objects and situations must be dealt with (problems of importance to him), not abstractions.

Teaching Illiterates

What can be done to direct or remotivate the culturally excluded adult illiterate? Education must extend itself to the illiterate and not as in the past, communicate the message that education is available to all who desire it and are willing to conform to its rigid standards. In order to educate the unschooled adult, educational institutions must be responsible for the total person, not only the formal learning segment of his life. Until now, each institution has declared responsibility for only its segment of the functioning organism. If success is to come where others have failed, then exceptional innovations must develop. To educate the adult illiterate successfully may mean extending services past the educational institution's bailiwick by working with his family, caring for his physical health, dealing with his neurotic and social needs. This may mean putting aside the three r's while an acute problem of dispossession or death is worked through. This task is possible only if teachers and institutions develop adaptive and innovative techniques.

Acceptance

Some understandings necessary to reverse the process of illiteracy or at least redirect it can be outlined. First, there needs to be an acceptance of the illiterate for who he is and not for what he can or cannot do. All people have this need, but acceptance is needed more by the excluded than the rest of society's members. They have seldom experienced acceptance. Being turned down on the basis of what one cannot do is a common experience for the excluded. Acceptance by the middle class world and respect for the lower class person's individuality is necessary. This is difficult for most middle class persons because their non-verbal signals of rejection over-ride their verbal acceptance. "I accept you, tell me your difficulty" is stated, but non-verbal signals of rejection are interpreted.

Secondly, acceptance and respect for existing behavior are necessary. This needs to be recognized as behavior usually learned from significant persons in their lives. If an individual is Methodist and someone mentions that he "shouldn't be a Methodist, but a Catholic," he would probably reject the idea vehemently. His response may be, "My mother was a Methodist and my father was a Methodist and my family before them were Methodists, therefore, you are not going to make me a Catholic." Frequently representatives of middle class culture (police, teacher, social worker, psychiatrist, etc.) indicate to lower class persons that a piece of behavior which they have learned from significant persons in their lives is wrong, maladaptive, and should be changed, rather than helping them find alternative behaviors not contrary to what they have know, cherished and believed in.

Solution-finding Process

Third, the tendency to think in terms of right and wrong, black and white, good and bad should be moderated. Offering as many alternative solutions as possible to a problem will aid persons to understand that alternatives are necessary and important aspects for solving difficulties. Social welfare programs have not done this. If there is a problem too frequently *institutionalized* solutions are offered. There is either a right or wrong solution based on the middle class morals and logic of the institution. What is necessary is that these persons be allowed and aided to find their own solutions to problems while learning the process of solution finding. This process is learned by being offered alternatives rather than by being told one "correct" answer. In other words, the solution most adaptable and functional in a given situation should be sought.

A fourth need in working with adult illiterates is to bring the family, whenever possible, into the educational process. To leave one's home and go to an educational institution at the age of 30 is more traumatic than to go as a child at the age of six. Family involvement creates psychological support for educational continuance. An interest in education by other family members provides support for the neophyte. A suggestion of this type may mean innovations in the location of the "school." Public school classrooms may not be the best for teaching adult illiterates. Other physical facilities such as a home, church, settlement house or neighborhood house established for this purpose may be more conducive to learning. The more subcultural, psychological, and familial supports the greater the opportunity of the educational process succeeding.

All problems must be heard and explored. For example, if English grammar is the subject, and someone raises a question not related to English grammar, there is no reason why the question cannot take precedence. It need not be said as has frequently been exclaimed in elementary and junior high school, "Don't interrupt the lesson." Satisfying a need at the time it occurs is necessary in order to establish a relationship and milieu for adequate and accurate learning. This involves working with problems that may be in no way related to the formal program, at least in terms of the course outline.

Human Relationships

Another aspect in the teaching process that needs to be strengthened is developing human relationships. Relationships can be on a one-to-one basis or one-to- thirty. It is not impossible. If a secure, comfortable, trusting relationship exists, skills become of interest and automatic for the learner. People then create a desire to learn. They are there to satisfy internalized feelings first, while grades, a somewhat fictitious representation of learned skills, are secondary. If financial remuneration enhances the desire to learn, then this too should be utilized.

It must also be remembered that the culturally excluded are frequently a negative reference group for the power-holding majority. Excluded persons are necessary for the maintenance of the status of many members of the dominant group. Although this is frequently denied by majority group members, it is consciously known and subconsicously felt by the excluded. Teachers, as representatives of middle class America and its educational institutions, are in a vulnerable position, in that they have a high potential for further alienating the excluded. This also has implications for inner-city teachers of culturally excluded youngsters, in the regular program. Unless the formalized social barriers of education are destroyed or worked through by providing opportunities for the excluded to taste the success of the included, then education of the illiterate will achieve little.

To say the task that lies ahead is difficult is an understatement, but the fruits of success can establish a meaningful reciprocal relationship between the educationally excluded and society's middle class representatives.

FOOTNOTES

[1] The term *cultural exclusion* developed out of a series of seminars with E. B. Brody, M.D. and Carl Schleifer, M.D. at the Psychiatric Institute, School of Medicine, University of Maryland. This concept was first presented by Dr. Brody at the Bertran Roberts Lectureship, Department of Psychiatry, Yale University, New Haven, Connecticut, February, 1965.

[2] For an elaborate discussion of these and other American values see Robin Williams, *American Society*. New York: Alfred A. Knopf, 1960, 415-470.

[3] Robert K. Merton, *Social Theory and Social Structure*. Glencoe: The Free Press, 1963. Chapter IV, "Social Structure and Anomie," 131-160.

[4] R. L. Derbyshire, E. B. Brody and Carl Schleifer. "The Family Structure of Young Adult Negro Male Mental Patients: Preliminary Observations from Urban Baltimore," *Journal of Nervous and Mental Disease*, Vol. 136, No. 3, March 1963, 245-251.

[5] The Los Angeles revolt of August 1965 is an example of collective action in response to the socio-cultural history of subjugation. Anger, hostility and aggression finally broke through the long psychological history of resignation.

[6] E. B. Brody and R. L. Derbyshire, "Prejudic in American Negro College Students," *Archives of General Psychiatry*, Vol. 4, December, 1963, 109-118.

PERSONALITY FACTORS WHICH MAY INTERFERE WITH THE LEARNING OF ADULT BASIC EDUCATION STUDENTS

William H. Puder and S. E. Hand

Abstract

This paper surveys the literature in several areas of psychological research in an effort to better understand the learning characteristics of culturally disadvantaged adults and to study certain emotional factors which appear to inhibit both participation of organized educational activities and effective learning. The survey of literature attempts: (1) to examine the concept of self, as it may pertain to the adult basic education student, (2) to review Rokeach's hypothesis of the closed belief-disbelief system in an effort to relate it to the emotional make-up of adult basic education students, (3) to describe the "closed" social environment which may give rise to the phenomenon of the "closed" mind, and (4) to identify some of the personality characteristics of the adult basic education student which may interfere with his potential as a learner.

The Concept of Self

A man's Self, his "Phenomenal" or "Unique" Self, is the hidden key to his learning behavior, and is formed through his internalization of what he thinks others think of him. Combs and Snygg (8) feel that people act in any situation as a function of how they perceive themselves and how they perceive the situation. Sullivan (25:17) says opinions of Self are formed through "reflected appraisals," inferences about ourselves made as a consequence of the ways we perceive others behaving toward us. Thus if an individual feels that other people consider him to be a trusting, honest person, he will view the world as a trusting, to-be-trusted place, and honest; on the other hand, if he feels that other people hate him or are hostile to him, he will internalize these perceptions and come to create a Self that views the world as

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hateful and hostile.

Jersild (19:9) holds with William James (18:291) that the Self is "the sum total of all that man can call his." Jersild (19:9-10) calls the self-concept

> *. . .a composite of thoughts and feelings which constitute a person's awareness of his individual existence. The Self includes, among other things, a system of ideas, attitudes, values, and commitments in an inner world. The Self is the nucleus of personality. . .*

Jersild concludes: "The Self is a person's total subjective environment."

These definitions and explanations of Self are of vital concern in the field of education, particularly in the areas of literacy education and adult basic education. Brookover, Shailer, and Patterson (2:278) report that there is a significant positive correlation between self-concept and performance in the academic role, and that self-concept is "positively and significantly correlated with the perceived evaluations that significant others hold of the student."

Brookover's findings are supported by Bruch and Baldwin (3:181) who write:

> *Educators have begun to share with clinicians the assumption that relationships exist between certain facets or components of personality and specific abilities, and have operated on this assumption. They found a positive relationship between educational disability and immature self-concept.*

Possibly most germane to a discussion of personality factors indicative of the "closed mind" of the adult basic learner is the evidence offered by Landsman(20). He traces the investigations of behavioral scientists in education who proceed, he says, along two major paths: the atomistic path, as in programmed learning, from parts to wholes, and the learner or self-concept path in which the learner is viewed as a self-perceiver as he encounters learning tasks.

Landsman writes:

> *It (the Self) is the central aspect of personality, consisting of a number of organized, defined objects or ideas, each with a corresponding attitude indicating its adequacy in the eyes of the person who is literally looking at himself and judging himself. Learning. . .is determined, influenced, distorted by the (learner's) view of Self. (20:290)*

Landsman feels that all learning is internalized more rapidly as it is perceived positively to the learner's aspects of self; and that learning which is related to negative aspects of self is pushed away, avoided, rejected, and only rarely internalized. He defines a well-adjusted person as the Open Self, a man who is free of his past, free of forgotten traumas, free of threatening groups. A well-adjusted person is an effective person, a being capable of approaching new ideas with enthusiasm, and fearing neither failure nor embarrassment.

But the closed self, Landsman says, is constricted, rejecting, fearful of anything new, anticipating failure, and avoiding new experiences. He states:

> *A series of threatening, frightening school years constricts and closes the self, develops feelings of self worthlessness and continues the vicious circle of avoidance of learning. (20: 294)*

Thus it appears important that individuals come to possess what Landsman calls an "open mind," because people learn only because they have found that learning has personal value for them. Fernald (12:10) says: "The greatest handicap to the non-reader is the complex which accompanies it." She feels that the closed mind is caused by "calling attention to the emotionally loaded situation in the classroom; teaching through the use of methods by which the student cannot learn, and by pointing out only the failures, not the successes of the student." (12:17)

That the open mind may welcome the learning effort, and the closed mind may interfere with the learning process may now appear apparent. Such being the case, let us look more fully into the concept of the closed mind, which now appears relevant to the learning difficulties of the culturally disadvantaged. In our attempt to further analyze this concept we shall rely, for the most part, upon Rokeach's work in this field.

The Closed Belief-Disbelief System

Rokeach (23), major proponent of the open- and closed-mind hypothesis, feels that there are closed minds in all realms of human effort: politics, religion, the academics of science, philosophy, and even humanistic thought. According to Rokeach, the closed mind persists in a form of ideological dogmatism, "a closed way of thinking which could be associated with any ideology regardless of content, an authoritarian outlook on life, an intolerance toward those with opposing beliefs, and a sufferance of those with similar beliefs." (23:45) The human mind contains a belief system which represents all the beliefs, sets, and expectancies that a person at any given time accepts as true; and a disbelief system, composed of a series of subsystems, disbeliefs, sets, and expectancies, which a person at any given time rejects as false. Rokeach has promulgated certain characteristics of the closed belief-disbelief system, several of which are listed below because they are particularly relevant to a discussion of the learning potential of the culturally disadvantaged:

1. The specific content of primitive beliefs is to the effect that the world one lives in is a threatening one.
2. The formal content of beliefs about authority and about people who hold to systems of authority is to the effect that authority is absolute, and that people are to be accepted and rejected according to their agreement or disagreement with such authority.
3. The structure of beliefs and disbeliefs perceived to emanate from authority is such that its substructures are in relative isolation from each other. (23:56)

In Rokeach's description of the closed mind, we can find several meaningful implications for adult basic education which shall be elaborated upon later. Rokeach further hypothesizes that all belief-disbelief systems serve two conflicting sets of motives:

1. The need for a cognitive framework to know and to understand (which, if stronger than other needs, results in the open mend).
2. The need to ward off threatening aspects of reality (which, if stronger than other needs, results in the closed mind).

Rokeach states:

> *To varying degrees, individuals may become disposed to accept or to form closed systems of thinking and believing in proportion to the degree to which they are made to feel alone, isolated, and helpless in the world in which they live, and thus anxious of what the future holds in store. These closed systems lead to feelings of guilt, and a disaffected outlook of life. The persons over-identify with absolute authority to defend Self from aloneness, isolation, self-hate and misanthropy. (23:69)*

In essence, therefore, the Closed Mind is a system of cognitive defenses against the pain of anxiety; it give rise to the preparation of defense mechanisms of repression, rationalization, denial, projection, reaction formation, and over-identification. Would not the erection of a system of cognitive defenses against anxiety be common to a sub-culture and to a people which feels rejected and deprived by the rest of society? If we lend credence to Rokeach's thesis about the closed mind, we may be able to investigate one of the environments in which the closed mind phenomenon occurs, an environment which is of paramount pertinence to the field of literacy teaching.

The Social Environment

In the world of 1967, the United States contains some 25,000,000 educationally disadvantaged persons who lead a marginal economic existence because they cannot read nor write nor communicate well enough to earn an adequate income. Most of these reside in urban areas, a result of the increasing migration of rural and farm populations to the city. Mumford (21:8) depicts these encaves as being rife with "dehumanized, purposeless materialism, seamy political life, uncontrolled technology, deteriorating slums, ignorance, tensions and frustrations."

Riese (22:29) finds "appalling numbers of Americans live in isolated status in a society with a total absence of positive stimulation: sensory, motor, mental or emotional. Exposed to terrifying experiences and distorting influences, they meet people whose standards are impressively higher, and a sense of paralyzing inadequacy ensues." In the world of the ghetto, just as in the culturally deprived rural areas where the frantic life of Megalopolis has not yet intruded, the homes of the illiterate, the culturally deprived, and the illiterate-to-be are "crowded with people but barren of objects." (22:46) In these homes were 25,000,000 Americans pursue their existence, several generations may live together, each generation contributing what little economic means it has to support the whole. Constantly on the move, the families lose their identities in the crowds, their living quarters deteriorating with each move from farm to city, from ghetto to city neighborhood, and so on.

Because the home is unattractive, and filled with noise of quarrels, nagging, and worrisome verbalizations, the illiterates-to-be eke out an emotional existence in the streets. The father who bids the offspring farewell in the morning may not be the same "father" who greets the child at night. And with the arrival and departure of each new "father," the mother's personality changes to adapt to the new sexual enviornment. As "fathers" come and go, as the mother's emotional reserves strain to meet the demands of husband and children, the emotional networks of the incipient illiterate receive, in turn, a thorough going-over; Riese concludes that the screening function of their nervous systems is ultimately exhausted, their goals are distorted or lost, and the desire for cognitive activity disappears.

This tragic awareness of family conflict, taken into the schools, leads to chronic interference with formal thought processes because there is a specific and a general relationship between family setting and the child's cognitive processes. As his emotional burdens interfere each hour with his social interactions with the world about him, the illiterate-to-be begins to construct, single-mindedly a value system, as related to Self, that is distorted and unreal; and the phenomenon of the Closed Mind, as Fernald (12) shows, begins to shelter the personality from the threatening world.

Tracing a second origin of the closed mind in the ghetto, Frenckel-Brunswik maintains that the closed mind is conceived in emotional "ambivalence and the role it plays in the development of the child's personality structure."

> *As a result of early parent child relationships involving varying degrees of permissiveness or punitiveness there emerge individual differences in the ability to tolerate emotional ambivalence toward parents, which in turn, spill over into social and cognitive spheres as well. Thus, a person who, through punishment, is not permitted to express his normal ambivalent feelings toward his parents develops a generalized need to structure his world rigidly, a pervasive tendency to premature closure, and a general intolerance of cognitive ambiguity. Such a Closed Mind is equally evident in sterotyped social attitudes toward minority groups, and in restricted and ineffective cognitive functioning. (quoted in 24:16-17)*

From the studies and writings of Mumford, Riese and Frenckel-Brunswik, we have been able to describe briefly the socio-economic origins of the closed mind, and of the culturally disadvantaged. Are we now able to establish a linkage between lower socio-economic status and closed-mindism or dogmatism?

Of key importance in establishing the relationship of lower socio-economic status to dogmatism is Frumkin's investigation (15) of dogmatism, social class values, and academic achievement. Frumkin shows that persons of lower socio-economic status are more dogmatic than high-status persons. Economic values dominate the lower class, he finds, and these persons tend to avoid problems in which highly abstract behavior is required.

How can the value dominances of the lower class be related to their relatively higher dogmatism? Frumkin maintains that part of the explanation is due to the intellectual orientation which dominates the lower-class individual. He tends to accept or reject the status quo on the basis of dogma he agrees with or disagrees with, but rarely in terms of scientific and critical examination. In fact, Frumkin feels that the lower-class person has very little real appreciation of what is involved in the scientific method of critical thinking. This is due, in part, to the passive economic and intellectual role required of the lower-class individual.

Frumkin concludes his interesting study with the optimistic observation that "education can help people become less dogmatic, because dogmatism is a function of the level of education: the higher a person advances within the educational complex, the less dogmatic he becomes." (15:401) From this it logically follows that education, by helping to decrease dogmatism in individuals, is aiding one of the most important aims of our democratically oriented society: namely, the creation of the kind of citizen who is more likely to act upon the basis of reason and critical thinking than upon impulse, emotion, and blind acceptance of dogma. However, Frumkin warns that:

> *Low socio-economic status. . .has the effect of maintaining dogmatism in disprivileged groups by preventing the development of the attitudes and opportunities necessary to achieve the critical intelligence needed to reduce dogmatism and achieve some measure of objectivity. (15:402)*

It is apparent from the evidence offered above that for diverse reasons, dogmatism is common to ghetto areas and to persons in the lower socio-economic classes. Yet what assurance does the educated have that dogmatism in the student personality is related in any way to the amount he learns? Several investigations cited below may provide a partial answer.

Ehrlich (10) studied the validity of certain aspects of the construct of dogmatism in an attempt to demonstrate the role of personality factors in a learning situation. He felt that persons who were high in dogmatism should exhibit less learning in a classroom situation than those who were low in dogmatism. In his tests of learning in the classroom, Ehrlich showed that dogmatism is inversely related to degree of learning. and that the relationship is independent of academic aptitude. Unfortunately, the validity of Ehrlich's conclusions has not been substantiated by subsequent tests; Christensen (7) duplicated Ehrlich's classroom tests, but obtained only null results. Further research in this area appear warranted, as Ehrlich himself indicates.

In a second study, Black (1) indicates that the culturally disadvantaged traditionally are "inflexible, not open to reason about morality, diet, their family polarity, and educational practices. . . ." She cites a number of additional traits of the culturally disadvantaged, emphasizing their attitudes of "alienation," and their tendency to "learn through physical, concrete tasks." Black's study is significant because contemporary educational practice for the culturally disadvantaged and the illiterate is oriented very largely upon the student's ability to grasp abstract, not concrete, concepts.

Jackson and Strattner (17) describe the reasons for unexplained variances in learning outcomes which linger after the effects of ability, prior learning, teaching methods and other task related variables have been removed. Their description reveals that:

1. Learning effectiveness is impaired by various forms of psychological pathology;
2. Membership in a socially deprived group or in a stressful family environment creates a threatening situation for them under classroom conditions;
3. Learning effectiveness is enhanced by the possession of particular psychological strengths such as positive attitudes toward school, realistic achievement goals, and feelings of self-confidence.

Meaningful learning, Jackson and Strattner state, usually requires sustained attention and willingness to modify previous beliefs. Therefore, any type of psychological disturbance that might reduce the learner's awareness or prevent him from accepting new knowledge would be expected to lower the efficiency of his performance. Two classes of conditions are most closely related to these specific effects: the first includes anxiey and related emotions; the second includes *authoritarianism* and other forms of *closed belief systems.*

Thus, in summary, the dogmatism of the low socio-economic peoples may represent an inhibitory factor to learning; and may well inhibit the learning repsonse of the culturally disadvantaged and the illiterate. Perhsps, at this time, we can ascertain in what *ways* dogmatism may interfere with learning.

Personality Characteristics and Learning

As we survey the literature on dogmatism, and on open and closed belief-disbelief systems, let us consider the personality characteristics of the adult basic education student, which may inhibit or interfere with his learning.

One consideration regarding individuals whose closed minds contribute to the illiteracy is the fact that such persons feel that they are being manipulated or victimized by forces beyond their control. Such people, those who feel that their own efforts to have little to do with the good or bad fortune that befalls them, Jackson (16) describes as "alienated." He maintains that the feeling of alienation is directly and importantly related to learning variables, and to the social experience of the learner.

As Jackson indicates, the sense of alienation is common to all persons whose social contacts with the outside world have caused them to create self-images in which are contained beliefs that they cannot exert control over life's factors, a self image that is passive and incapable of reacting to the "slings and arrows of outraged fortune."

Jackson maintains that alienation, as a personality characteristic–and as a breeding ground for dogmatic, closed mind tendencies–arises in a unique personal history, a history of deprivation, economic and physiological starvation, and emotional storm; in a loss of personal power within the school situation, and finally, within the home, where no emotional support, overt or covert, is rendered to the values constructed in the schools.

Alienation, so typical of the ghettos of our major cities, exists at four levels:

1. *First Level,* in which the person feels unable to control facilities and environment.
2. *Second Level,* in which the person no longer feels a need to adhere to society's expectations. At the second level, presumably, deliquency begins: the hub-cap stealing, the gasoline station shake-down.
3. *Third Level,* in which the person refuses to conform to the rules and regulations by which goals are achieved. At this stage, it appears, the youthful criminality begins to harden; the goals and hopes of earlier years fade rapidly away.
4. *Fourth Level,* in which the person rejects or fails to develop a commitment to one or more fundamental values of his society.

As the culturally disadvantaged "progress" from one level to the next higher, the tendency to minimize and defame school values, and to "close" the mind against the school, against education, and against educational and societal goals grows greater and greater. Perhaps, as Jackson (17) believes, the greatest socio-intellectual challenges of our time lie in the area of alienation.

In a second study of alienation Seeman and Evans (24) found that a person's sense of alienation or powerlessness is a factor which affects his response to critical circumstances in his career. In their studies of male tuberculosis patients, Seeman and Evans rated their subjects with an alienation scale that purported to assess a set of expectations for "little control over events." Their results show that patients high in alienation had not learned so much about their illness and about the hospital and hospital life and work as those with low alienation scores. Their data would seem to mean that people who are oriented by luck or fate tend to be passive and yielding to the on-rush of life–as do the culturally deprived–and that these persons who seek out information are behaving as though they can control events through knowledge–as do the middle and upper classes.

A second personality characteristic of the adult basic learner that might interfere with his learning is dealt with in Dollard and Miller's hypothesis (9) concerning "gradients of approach and avoidance." They maintain that the tendency of an individual to avoid a feared stimulus--in this case, an education, or the school--is stronger the closer the individual is to it. This would account for the fact that in our current efforts to bring education to the nation's illiterates, and to enroll the culturally disadvantaged in basic education programs we often encounter strong and even violent resistance.

A third personality characteristic of the adult basic education student may be contained in the "hostility and anxiety toward authority" which Taylor (26) finds is characteristic of the low achiever. He states:

> *The degree to which a student is able to control his anxiety is directly related to his level of achievement, and the student's ability to conform to and/or accept authority demands will determine the amount of academic success. (28:81)*

The hostility exhibited by ghetto residents toward authority is legendary. In fact, a major change in curriculum content has been made in the Great Cities Schools Improvement Programs as educators attempt materially to change the adult basic learner's concepts of the policeman and the role of the law in contemporary society.

The phenomenon of "withdrawal" may constitute a fourth symptom of the closed belief-disbelief system of the adult basic learner. Erik Erikson (11) attributes withdrawal to a sense of identity confusion. He defines withdrawal as

> *the excluding of all sense of social solidarity. . .and leading possibly to snobbish isolation which finds companions but no friends. Withdrawal, or the closing of the mind to certain unfavorable aspects of the environment, is an adaptation, a character deformation indication. . .a pathological process in the personality system. (11:19)*

Erikson's definition seems to include some parts of Jackson's alienation concept, and some facets of Freud's concept of rejection; and as such, appears to constitute a personality inhibition to learning.

A fifth personality characteristic indicative of the closed mind of the adult basic learner may be found in Feshback and Singer's contention (13) that individuals, when afraid–and members of the low socio-economic classes are reputedly afraid and anxious–tend to judge a stimulus person (the teacher) as fearful; and that instructions from persons in authority designed to inhibit their feelings tend to enhance this effect. Thus, it would appear that the greater the effect exerted by the culturally deprived to approach the threatening school situation, the greater will be his fear of the threatening environment. Conversely, the greater effort exerted by the teacher of school authorities to bring education to the illiterate or to the low socio-economic class member, the more fearful the situation may seem to the prospective student.

Burt (5:24) proposes a sixth personality characteristic of the adult illiterate: "The illiterate is convinced he cannot read. He exhibits continuous feelings of shyness and disability. . . ." Both Burt's observations as to the personality of the illiterate are excellent evidence of the closed belief-disbelief systems of illiterate individuals. Burt's idea suggests an adult illiterate as an individual who is "sold" on his own reading disability, a person whose mind refuses to believe he can read now or ever.

Complete rejection of the desire to develop intellectually may constitute a seventh personality characteristic of the closed mind in the adult illiterate. According to Burman (4), adults on the lower socio-economic levels, training, have no interest whatsover in intellectual development. The rejection is an inevitable concomitant of years of emotional and economic deprivation, and of a lifetime of rejection in the schools.

Cass (6) feels that adult illiterates exhibit a spectrum of common characteristics, the greater number of which are evidence of a closed belief-disbelief system that could interfere with new learning activities. Among them, Cass lists extreme sensitivity, diffidence, feelings of frustration and futility, resistance to knowledge, awkward mental attack, inhibited approach to social interactions, and "mental blocks" against the world.

Discussion

In summary, the literature appears to substantiate the belief that there are many personality factors, or characteristics, which may tend to interfere with the learning of adult basic education students. Among these we might include: alienation, avoidance, hostility toward authority, withdrawal, violent aggression, fear of schools, self-image as an illiterate, rejection of the desire to develop intellectually, mental blocks against the world, rigid value systems, and others.

Though the literature is voluminous on the subject, the personality factors inherent in the open-closed mind phenomenon are not the only inhibitors in the illiterate's struggle to obtain an education. In a world he did not make, the illiterate must break out of a caul of defeat, desperation and despair if he is to *achieve.* This caul is compounded of parental failures, societal failures, and the failures of history. The causes of his illiteracy are as numberless as the paving stones of the street he calls home.

When the nation undertakes to bring education to its culturally deprived, it undertakes a staggering task. This task will require a high degree of commitment, and educators must bring new weapons, new resources and new approaches to fight the closed mind–a prime source of the culturally deprived person's resistance to learning.

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PART III

BASIC READING SKILLS

SOME OBSERVATIONS ON ADULT READING SKILLS

Quinton W. Guerin
Training Assistant, Electronic Supply Office, Great Lakes, Ill.;
Instructor, Waukegan Township High School, Waukegan, Ill.

The statements included in this article are based upon observations and studies conducted while helping over 400 adults to improve their reading abilities. The individuals reported on include electronics technicians employed at the Electronic Supply Office, Great Lakes, Illinois, and night school enrollees at the Waukegan Township High School, Waukegan, Illinois. Included in the courses conducted at the Naval Center at Great Lakes are Naval Officers, civilian supervisors, electronics technicians, and office clerks. In a period of over two and one-half years 20 different groups have participated in the Navy-sponsored program and three groups of adults in the Waukegan High School Reading Improvement Course.

In both the reading courses similar methods of training are used. Each group meets for a minimum of 15 sessions with portions of the sessions devoted to exercises in reading, visual span training, and reading practice periods using a reading accelerator. To date, classes have averaged between 45 and 65 per cent increases in reading speed with approximately a seven per cent increase in reading comprehension. Improvement in both programs is determined by giving one form of the Science Research Associates Reading Diagnostic Survey Section Forms A or B at the beginning and one form at the end of the program.[1]

Relation of Interest in Subject Matter to Reading Speed

In most cases, if an adult is interested in an article (that is, if he stated that he found the material interesting rather than dull or uninteresting), his reading rate will probably be increased by as

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much as 25 WPM (words per minute) if he is an average reader,[2] and by as much as 75 WPM if he is a very fast reader. Generally this statement applies; however, some adults react just the opposite, for it was found that if certain individuals find an article interesting or if the article appears to meet a purposeful need, they tend to read it more slowly than they would an article of average interest.

Relation of Nature of Subject Matter to Reading Speed

Generally, adults have not acquired the ability to adapt varied reading techniques to the nature of the material being read or to their purpose in reading the material. For the most part, adults read all types of materials at virtually the same reading rate. They have not acquired the ability to skim in order to locate specific facts, nor have they acquired the ability to organize their reading to meet their purposes. It appears that the majority of adults have acquired a fear which prevents them from skipping or skimming portions of an article, pamphlet, or book. In counseling sessions concerning their reading abilities adults make statements which indicate that they feel a personal guilt toward their having purposely skipped a portion of a reading item. These same individuals become quite insecure in the reading act when the instructors ask them to practice such reading skills as:

(1) skimming to locate a fact or detail;
(2) learning to spot a significant phrase or a key word;
(3) locating the central thought of an article by examining opening and closing sentences as well as titles and paragraph headings.

Recall and Inference

Based upon the nature of the articles and the type of questions which are included in the SRA Better Reading Books,[3] adults appear to be better able to recall specific details included in the articles than they are able to pick out the central thought in a multiple choice type of reading comprehension exercise. Similarly, the ability to draw inferences from what has been read is a reading skill which is lacking more often than the ability to pick out the central thought. In all too many cases, because a statement of a specific fact is made as a part of the multiple choice question, the individuals tend to mark it as the statement which best expresses the central thought of the article. To help the individual overcome this tendency, he is required to place a C beside the statement which most nearly expresses the central idea of the essay, a W if it is wrong (inaccurate wholly or partially), and an I if it is inadequate (incomplete, though correct in all that is said). In using this technique the instructor stresses the point that only *one* of the statements should be marked C. Class discussion concerning what in the statement makes it the best expression of the central thought usually brings about a consensus. In this way, the individuals learn how others discriminate between statement of facts in the article and the central thought of the materials.

Relation of Vocabulary to Reading Speed and Comprehension

In the study designed to determine the relationship between vocabulary score as determined on the basis of the Science Research Associates Reading Diagnostic Test and the level of comprehension of the 60 adults tested, it was found that the correlation was only .24. Similarly, a low correlation of .43 was found between reading speed and vocabulary. Furthermore, when the reading score,[4] which is a figure derived by multiplying reading speed times comprehension, was matched against vocabulary socre, a correlation figure of .32 was obtained. On the basis of these studies and through insights gained from the testing programs connected with reading courses, there does not appear to be any significant correlation between reading speed and comprehension or vocabulary. As a matter of fact, it is not rare to find as many as four or five adults in a class of 25 who score in the upper percentile ranges in vocabulary and end up in the very lowest percentile ranges in reading speed or reading comprehension.

Adult Recognition Problems

Visual span development training in which words, phrases, and sentences are flashed on the screen has disclosed that adult recognition errors tend to be similar to the reversal, addition, and omission errors so often diagnosed in elementary school remedial reading situations. For instance, the sentence, "He is haughty," is read "He is naughty." The word "brought" is read as "bought." The letter "d" is read as "b," and "u" is read as "n." Flash cards and locally prepared tachistoscope slides have been found to be very helpful in correcting these recognition errors.

Remembering What Has Been Read

A study has recently been conducted at the Electronic Supply Office in order to determine whether or not good readers – that is, individuals who read fast and comprehend well – remember as much of what they read as do individuals who have lower reading scores. While this study is inconclusive, there does not appear to be a significant relationship between how fast an individual reads and how much that person will remember after a month's lapse of time. Neither fast nor slow readers appeared to have remembered any more or less than did the average readers. However, it was found that persons who read well, as indicated by high reading scores, appeared to have remembered more of what they had read than did the individuals who had lower reading scores. In the group of 36 individuals retested on reading comprehension after a lapse of one month, eight individuals who had high reading scores had no loss in comprehension. The range of loss for the month's period ranged from zero to 35 per cent, with an average loss of eight per cent and a median loss of five per cent.

The method of determining reading memory loss was simple. Thirty-six of the persons who took the original comprehension portion of the speed and comprehension part of the diagnostic test were re-tested one month later. At that time they were given the comprehension questions without the reading article. The members of this group had not been given prior notice, nor had they been told that they would be re-tested on the comprehension portion of the reading speed and comprehension test.

Conclusion

Probably the greatest insights that can be gained from working with adults and their reading problems are in the intangible areas that tests and correlations studies do not disclose. Experience has led me to believe that adults who participate in reading improvement programs gain a considerable amount of confidence in themselves. Over 90 per cent of the people who enter a reading course think they are very poor readers. How they acquired this belief varies with the individual. Most feel that they are not "getting enough out of what they read." Of course they cannot define what "getting enough out of what they read" means. Usually this has to do with remembering something which they think they should have remembered from what they previously had read. I don't believe any reading course really eliminates this insecurity or feeling about "getting enough out of what they read." I do believe, however, that reading improvement courses help the individuals by making them aware that other adults are also insecure about their reading abilities and that on the whole they do not read as poorly as they had once imagined. Much of the newly acquired confidence the individual gains from reading improvement programs can be attributed to the fact that the individual himself has gained some insights into the nature of the reading process. He therefore undertakes the reading task by applying a reading method better geared to the nature of the material and to his own purpose in reading.

FOOTNOTES

[1] A projection device called a tachistoscope is used to develop the visual span and the recognition abilities of the trainee. Words, phrases, and whole sentences are flashed on the screen at speeds ranging from one-tenth of a second to one-hundredth of a second.

[2] An average reader is defined as one who reads at a rate ranging between 225 and 315 WPM based on a score obtained on the SRA Diagnostic Test. A fast reader is defined as one who reads faster than 315 WPM.

[3] The SRA Better Reading Books are comprised of reading exercises with each article containing 1350 words with 20 multiple choice comprehension questions concerning the article. The articles are at a readability level similar to the average type of article found in *Reader's Digest* or *Coronet*.

[4] An individual's reading score is determined by multiplying his reading rate expressed in words per minute by his reading comprehension score expressed in terms of the per cent of correct answers. For instance, with a reading speed of 290 WPM and a comprehension score of 90 per cent, the individual's reading score would be 26100. Eliminating the last two digits, his reading score would be 261.

TEACHING WORD-MEANING THROUGH CONTEXT

by A. Sterl Artley

Meaning of Context

Teachers of reading have for years made use of context clues, along with configuration clues, picture clues, and word analysis, as a means of developing independence in word recognition. In this sense context clues refer to what might commonly be called "hints" that lie within a sentence, which are used as a means of aiding the child in recognizing the meaning of a new or unfamiliar word. If, for example, in the sentence, "The boy stumbled and seemed about to fall," *stumbled* should be a word with which the child is unfamiliar, he is encouraged to read the remainder of the sentence, omitting the difficult word, which logically "guessing" as to what the word might be. In this sense context is defined by Perrin[2] as "the discourse that surrounds a word or passage that is being separately discussed."

In a broader sense, however, context clues refer to much more than merely the cues to meaning afforded by the other words that are closely associated with an unknown word. Let us take, for example, "We were unable to complete the job, for after several revolutions of the wheel, the dog broke." For our purpose let us assume that the child knows the meaning of every word in the sentence; that is, the common, every-day meaning. In spite of this the sentence might not convey sense, especially as it involves the unusual meaning of "dog." It simply doesn't make sense to say, "the dog broke." Yet, if the child has seen his father reassemble a lawnmower wheel and had heard him refer to the "dog" as the device which regulated the action of the cutting blades, he would immediately have an idea of the full meaning of the sentence. One must get the full interpretation *through*

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experience with the thing in question. In other words, context clues may be experiential as well as verbal.

To the two types of context aids to meaning already mentioned, there might still be added a third, namely, that which is expressed in the author's tone, mood, and intent. Although one might be able to comprehend a paragraph or stanza of a poem on the basis of the objective sense-meaning alone, a complete, appreciative interpretation of the whole rests upon those subtle, subjective factors, the clues to which exist in the tone, mood, and intent of the writer.

Examples of Contextual Aids

It is important that the classroom teacher be able to recognize the various types of contextual clues as a means of guiding the child to a full interpretation of meaning. Moreover, it is more important that the child himself be able to recognize the various types of aids to meaning, so that he may use them independently and automatically to interpret the full sense-meaning of the sentence or paragraph, as well as the subtle implication.

It must be pointed out that the following classification of contextual aids to meaning is purely an arbitrary one containing a great deal of overlapping. The purpose of this grouping has been merely to organize context in such a way that they might be presented systematically to the child. The teacher must realize, however, that rarely will a particular clue exist in complete isolation.

1. Typographical aids
   a Quotation marks–The "minutes" of a meeting are usually written by the secretary.
   b Italics–The *minutes* of a meeting are usually written by the secretary.
   c Bold face type–The **minutes** of a meeting are usually written by the secretary,

It is obvious that these three devices are inadequate in providing a meaning for the word "minutes." They do, however, point out the word and emphasize the fact that here is a new word, or a common word in an unusual setting, which needs to be studied or looked up in the glossary or dictionary. Gray and Holmes point out that unless these devices are paralleled by illustration, explanation, or definition, as means of satisfying the child's curiosity, they are of little value.

d. Parentheses–The minutes (a written record) of a meeting are usually written by the secretary.
e. Footnotes or glossary references–The minutes* of a meeting are usually written by the secretary. (At bottom of page) *minutes–a written official record of the proceedings.

These two devices are particularly valuable since a definite reference is made to the particular word. Not only do we have a direct reference to the word, but the explanation is usually superior to a dictionary definition since it refers to the word in the particular context in which it is used.

Little needs to be done by the teacher in teaching the use of context clues as expressed in parentheses and footnotes, since the meanings are so obvious. In respect to the first group of typographical aids mentioned, the teacher needs to capitalize upon the child's curiosity as aroused by the word, and supply the necessary meaning. These devices should be taught as "stop signals," or as a means of informing the child that here is an unusual use of a familiar word, the meaning of which must be secured through inference, or by the use of the dictionary.

2. Structural aids
   a. Appositive phrase or clause–The fertilizer should supply plenty of vegetable matter, which by decaying furnishes *humus*, the food for plant live.
   b. Non-restrictive phrase or clause–The decaying vegetable matter of fertilizer will furnish *humus*, which is food upon which plant life depends.
   c. Interpolated phrase or clause–*Humus*–the food for plant life–comes from the decaying vegetable matter of the fertilizer.

Structural or grammatical elements furnish very useful of meaning. In fact, grammar takes on meaning to children when they see that it has a definite function in aiding interpretation as in the sentences above. Sentences having troublesome words should be analyzed for these structural aids, and the children led to see that commas and dashes are often helpful warnings to go slowly for meaning. Again, practice exercises might be constructed, containing elements like the above, and be used as the basis for class discussion.

3. Substitute words
   - a. Synonyms–The fertilizer should supply plenty of vegetable matter, which by decaying furnishes *humus* or vegetable mold. (The word *"humus"* is explained through the use of the phrase, "vegetable mold," which has similar meaning to the original word.)
   - b. Antonyms–There is a great difference between the important and the *trivial* in what he has said. (The meaning of "trivial" is expressed through the opposite of "important.")

Synonyms and antonyms are very important aids, and for skillful readers, furnish almost unconscious clues to meaning. The teacher might devise exercises somewhat like those above where similar and unlike words are used that directly or indirectly give clues to meaning.

4. Word elements
   - a. Roots–John was successful in the *aquatic* event. (Meaning of the word derived from knowledge that the root, *aqua,* means water.)
   - b. Prefixes–After numerous tests, the inspector found the milk to be *sub-standard.* (Meaning derived from knowledge that prefix, *sub,* refers to under, below.)
   - c. Suffixes–The attorney was well versed in *criminology.* (Here the meaning may be derived from the knowledge that the suffix *ology,* means the science or knowledge of.)

Knowledge of common roots, prefixes, and suffixes are valuable aids to meanings of new words, and in this connection the knowledge of foreign languages has value in the building of English word meanings. A valuable exercise consists of studying word families, or words related in meaning to a particular word element. This might be done by suggesting a word element; root, let us say, and having the pupils suggest all the words that are related, pointing out in each case the relationship. The pupils should be cautioned however, that due to the devious history of many words, the present meaning may be only indirectly related to the original element, or vice versa. Witness for example, the word *pew* from the root *pod.* In this case both the present day word and its meaning are only indirectly related to the original element, and one can only in a very indirect way get a hint as to the meaning of the word.

5. Figure of Speech
    a. Similes–The old car *lurched* forward like an anxious dog released by its master. (Meaning of "lurched" expressed in the simile "like an anxious dog released.")
    b. Metaphors–You dare not *evade* the responsibility, for the promise you gave is binding. ("Evade" is subtly explained in the metaphorical used of "binding" in relation to promise. If you are "bound" to a promise you then dare not step aside or get away from (evade) the responsibility.

Figures of speech may be referred to as particular types of inferential clues. The contextual use of the simile, usually expressed after the words "like" or "as," is very easy to understand and usually requires only incidental mentioning by the teacher. Unless children have had instruction in the use of metaphor, it is usually best to treat clues to meaning that lie in that particular figure of speech as inferential clues (No. 7).

6. Pictorial Representations
    a. Pictures–Egypt is often called the land of the *pyramid.* (Picture of pyramid at side of page.)
    b. Diagrams–The *superheterodyne circuit* resulted in a great

improvement in radio reception. (Schematic diagram in text.)

c. Charts, graphs, maps—Learning will take place effectively until a *plateau* is reached. (Graphs at side of page illustrating a learning plateau.)

Valuable and obvious clues to meaning lie in pictorial representations which accompany the text. It is generally sufficient to point out to the child that a clue to the meaning of a troublesome word may be found in a chart, diagram, or picture. In science, particularly, the parts of an object, a flower, for example, are often designated by dotted lines connecting the parts and words. Every opportunity should be taken to utilize this device as a valuable aid to word meaning.

7. Inference

> Sunlight is an accepted germicide, for even the most hardly bacteria will die in a short time under its direct rays. Not only will the sunlight kill germs, but it will prevent them from growing. (Meaning of "germicide" inferred from the rest of the sentence and following sentences through such words as "die," "kill," "prevent.")

Of all the contextual aids to meaning, those secured through inference are perhaps the most helpful. Inferential aids are particularly helpful since there are so many times where no typographical aids, punctuation, or familiar word elements offer help in giving an interpretation of the word and sentence. Though inference is most helpful in securing meaning, it is perhaps the least used. Hence, the teacher should give it special attention. In teaching its use, actual class texts in geography or history should be utilized from which the children are privileged to suggest words, the meanings of which are not entirely clear. They should then be encouraged to omit the word temporarily and see whether the meaning, or a close meaning, might not be extracted from the rest of the sentence. Children should form the habit of inferring the meanings of words as a time saver rather than referring to the dictionary. There will be words, naturally, where the remainder of sentence will give no help in meaning. In this case one will then refer to the dictionary.

8. Direct Explanation

   Many objects are *bouyant* which simply means that they will float on the surface of the water. As you already know, cork or pine float about readily, and even a steel ship will not sink. (In this case the author is directly attempting to make clear the meaning of the unfamiliar word by explaining it and giving examples.)

9. Background of Experience

   The *lumberjack* skids the logs on the *bobs* with the use of a *cant-hook.*

In the above example it is apparent that a background of experience is necessary on the part of the reader for a full and complete interpretation of meaning. Where direct contextual aids are not given, the teacher should supply the basis for understanding through excursions, field-trips, pictures, films, slides, museum exhibits, models, and the like.

10. Subjective Clues

    a. Tone–

       Such a poor, old, gray-haired man as leader! To ask him to serve us again is to murder him. How can we impose ourselves as his worthless children upon such a paternal creature?

This statement, uttered by one who is upholding the virtues of a veteran leader with a record of honorable public service, but who, in the interests of health, should be permitted to retire, would possibly draw forth sympathetic assents from the audience. If, on the other hand, it were made by a politician in a sarcastic tone of one who should be forced to retire to give way to himself, it might be met with laughter. One can interpret the meaning only through the context of the *tone* in which the utterance was made.

b. Mood–

All day she sits behind a bright brass rail
Planning proud journeyings in terms that bring
Far places near; high-colored words that sing,
"The Taj Mahal at Agra," "Kashmir's Vale,"
Spanning wide spaces with her clear details,
"Sevilla or Fiesole in Spring.
Through the fiords in June." Her words take wing
She is the minstrel of the great out-trail.
At half past five she puts her maps away,
Pins on a gray, meek hat, and braves the sleet,
A timid eye on traffic. Duly gray
The house that harbors her in a gray street,
The close, sequestered, colorless retreat
Where she was born, where she will always stay.
("The Travel Bureau"–Ruth Comfort Mitchell)

This sense meaning of this poem is incidental to the mood which the author is trying to express, and one can interpret it properly only through that context of mood–in this poem the mood of one living a common-place life, but dreaming of doing great things and seeing fine places.

c. Intent–

The final score with 509 softball players showed that 3 out of 5 preferred the flavor of Flavor-last gum. The purpose of the writer of this quip is obvious, even without the phrase which might follow–"Get a package today."

In this last group of context clues one sees *meaning* as much more than that which lies within the pale of sense-meaning. To read even a simple newspaper account–especially today when propaganda is rampant–requires much probing below the surface if one desires a full interpretation. It is the prime responsibility of the teacher to make the pupil aware of all the subtle implications found in news accounts, advertisements–in fact, in writings of any kind. Such questions as the following might be asked of the surface to the real heart of the meaning. "How do you think the author would have *spoken it?*" "Is what he said what he obviously wanted to say?" "How do you think the author felt; what mood was he in?" "What can you read between the lines that wouldn't be apparent to the casual reader?" "What do you think the author would like to have us do after reading his paragraph?"

Use of Context Clues

One of the most practical uses of context clues is that of helping the child extend his present vocabulary. The dictionary has a place in helping the children to a meaning of unfamiliar words, but teachers would do well to recognize dictionary limitations and to teach their children of them. It is an interesting and instructive exercise to take a text book that children are using, or even the daily paper, and on a particular page have the children suggest words with which they are not entirely familiar. With the list on the blackboard, and the magazine or text at hand, the teacher should carefully read the sentence aloud, asking the pupils to note any clues with the sentence, or in those nearby, that might suggest the meaning of the unknown word. Where the children experience difficulty the teacher should furnish help by pointing out familiar word elements, structural aids, the use of synonyms, and the like. In this manner the pupils will become less dependent on the dictionary, using it only where contextual aids are not available, or where a more precise definition is desired.

Mention was made of the limitation of the dictionary in supplying word meaning. This should have further consideration. Were the meanings of words in a sentence separate and distinct like the posts in a fence, it would be possible to take the definition of each of the words, put them together, and arrive at the meaning. In this case "*fresh peach* pie" and "*fresh* peach *pie*" would add up to the same meaning, in spite of the fact that in one we are emphasizing the fresh peaches as distinct from canned ones; while in the other, a fresh pie as distinct from the one of a dayold, soaked crust. In this simple illustration it is apparent that the meaning *intended* by the author is more significant than the definition of the words. To put it another way, the meaning of a sentence is the result of the relationship, the interplay, that exists between the words, as well as the mood, intent, and tone of the author.

From this one can see that the sheer dictionary definitions might be inadequate to a full meaning that the author is trying to express. But surely a dictionary has some purpose, some value. What is it? Zahner in *Reading in General Education*[3] states the value and limitation of the dictionary well in the following words:

> *. . .The dictionary lists the literal sense-meanings of the word and some of the metaphorical-sense-meanings which have got into common use. It indicates the present boundaries of the sense-meaning, and within the field drives in several fixed stakes, useful as guide-posts. But it does not exactly place in this field the sense-meaning of the word in any given passage; nor can it give any hint at all of the other kinds of meaning the word may convey–tone, mood, or intent. The common idea that it is the dictionary that "defines" a word, or that gives it its meaning; that the dictionary is the one and final authority as to what in any given instance the word is being used to say; that the matter of understanding and comprehension can be settled by reference to the dictionary, is a common error, and one that is directly or indirectly responsible for some of the common blocks and imperfections in communication and for questionable practice in general education.*

True, the dictionary will continue to be a valuable reference book, but its many limitations should be recognized and the pupils led to see that the sentence context itself is at times the best clue to a full and complete meaning.

In spite of the fact that word relationships and, in some cases, the dictionary itself may be utilized as aids to meanings, it must be pointed out that neither the context nor the dictionary *gives* a particular word *meaning.* In the final analysis "meaning" comes only through the combined experience of the writer and the reader. As Zahner points out[3] "The narrow use of 'context' as other words printed in the passage. . .is simply the clue to the present situation." This makes apparent the responsibility of the teacher in supplying a background of experience as a basis for complete understanding, in other words, supplying referents.

Though teachers of primary grades have utilized direct and vicarious experiences to a certain extent, teachers on the upper levels have by no means made sufficient use of them. with the result that much of the learning is sheer verbalism.

As was implied at the outset, the term context clues have been extended to include not only the words that surround a given word, but also those clues to meaning that exist in the past experience of the writer and reader, and those subtly expressed in the tone, mood, and intent of the writer. Moreover, it is not only imperative that children know of the existence of context clues, but that they utilize them automatically in their everyday reading. Only by so doing will they be able to transcend ordinarily sense-meaning, and come to a complete understanding and full interpretation of what is being read.

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THE LAUBACH METHOD

by Richard W. Cortright
Director of Education
Laubach Literacy Fund, Inc.

In 1929 few educators in the United States or abroad appeared interested in the illiterates. It was tacitly assumed that there was no appreciable number of illiterates in America. The illiterates, in large numbers at least, were faraway in African jungles, Asian deserts, or on South American mountains. This was the scene as most Americans probably viewed it. But this was also the time when the Hoover Commission was investigating illiteracy in the United States and William S. Gray was preparing a manual for teachers of the illiterates in America.

Faraway, in the Philippines, Frank C. Laubach was preparing a writing system for an obscure Malayo-Polynesian language, Maranaw, a linguistically-structured consonant vowel (cv) language with only four vowels (later to be reinterpreted as five phonemic vowels). The writing of unwritten alphabets was a new skill; a few anthropologists had recorded certain North American Indian languages like Kwakiutl, but not many.

Although trained as a minister and sociologist at Princeton and Columbia Universities, Laubach had set out to found a college or at least a junior college. However, most of the people in the area were illiterate. The difficulty of first making them literate was compounded by the inherent distrust of the Maranaws toward a white foreigner, a distrust by Muslims, who had fought both the Spanish for centuries and the Americans for decades.

A result of Laubach's experimentation in Mindanao in the late twenties and early thirties set the stage for the development of the literacy method which became known by the epithet, *Each One Teach One*, a term originally used by a Filipino in the early days of the literacy program.[1] It is interesting to note that not

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only were many Maranaws brought within the family of literate men and women, but also that in time the college for Maranaws was constructed and still exists to offer instruction far beyond the level of minimal literacy.

Since then the widespread use of Laubach methodology in nations of the world's socioeconomically underdeveloped regions have made the method better known abroad than in the United States. Until the end of World War II most of Laubach's educational efforts took place in the emerging nations at the invitation of both government and nongovernment agencies and organizations. During this time adult basic education (literacy) materials were prepared in many languages and in many countries. After the war, work was continued abroad, but a new emphasis was placed on the preparation of materials in English and in the development of specialized educational programs in universities and of short courses known as Laubach Literacy Workshops sponsored by Literacy Councils.[2]

As the result of postwar efforts, the number of languages in which Laubach literacy educational material had been prepared reached 311, and the countries, 103, including most of Asia, all of Latin America, and nearly all of Africa. During this time the Laubach method retained as a popular identification the epithet *Each One Teach One*. However, this term was often narrowly interpreted or even misinterpreted. The term both as a methodology and as a philosophy of education has been explained elsewhere.[3]

A further complication in easily defining the "Laubach method" is the fact that the method has gradually evolved and often changed. Generally, the method has evolved from a simple "key word" method. This form of the method used a few words which contained all of the consonants of Maranaw with the vowel "a." A well-known example is the list of the first three key words used about 1930: *karatasa, malabanga, paganada*. However, Philippine languages were much different from Dravidian languages (a language family in India, Ceylon, and West Pakistan with no established relationship to any other). Therefore, when Tamil materials were prepared in the early 1930's, a "key chain" method was used which identified on the left side of the page each consonant by a word which began with that consonant, and along the top of the page a similar scheme for the vowels. The result was a matrix of consonant-vowel patterns used for drills of all the possible consonant-vowel patterns in Tamil.

The variation in form of individual letters of such alphabets as Arabic necessitated speical art work to prepare proper configurations, for by the 1940's the principle of configuration, adapted from India, had been incorporated in the chart materials of Laubach-prepared or Laubach-inspired materials. A number of the materials were prepared by associates of Laubach or by others who had gained hold of a copy of some vintage Laubach materials. A further result was that the methodology was interpreted and supposed Laubach material was prepared which only partially justified the appellation of the methodology have taken place, and continue to take place.

To illustrate the Laubach method as it appears in the first book for new adult literates (New Readers or New Audience), current material in Colombian Spanish and American English are useful. The structural differences of a language dictate a variation in methodology. Nevertheless, certain identifiable characteristics predominate and show what are unmistakable Laubach-prepared or Laubach-inspired educational materials. In the Colombian primer, *Hacia una patria mejor, Libro a,* for example, writing is introduced at the beginning. Moreover, rather than the usual introduction of the "a" vowel, letter frequency counts dictate the use of "o." The configuration principle is used; for example, the "c" is superimposed over the picture of the "coco" (coconut), an object familiar to the illiterates. Space is provided for written practice and provision is made for the repetition of each new letter in the context of each new word. Many repetitions are used.[4]

The English language Laubach literacy materials have appeared in three principal publication series. The first, a programmed series of self-instructional materials, entitled *Building Your Language Power,*[5] has been published. (The second, a new orthography for English, called *English the New Way,* has been used to teach the Laubach method.[6] This new spelling system uses a transition book to carry students over to standard English orthography. The third series of publications is the English series

Streamlined English.[7] This system, also called "Streamlined Reading," was the basis of the first literacy television series in the United States.[8] The *Streamlined English* series "begins with zero literacy and in the first book brings the student to a high third grade reading ability. Two follow-up books, *A Door Opens* and *Going Forward,* continue the study through the fourth and fifth grades. The *Streamlined English* materials with accompanying large charts are especially useful in individual tutorial situations and in small classes."[9]

Streamlined English was originally prepared for and tested among native English-speaking illiterates in New York City. For nearly twenty years it has been used with various groups in every state in the United States and in many countries as a basic or supplementary textbook in teaching English as a foreign language. Originally *Streamlined English* was published without the *Charts and Stories,* the initial phonic component of the Laubach method in English. *Charts and Stories*[10] was first prepared and used in Maryland, later republished as *Reading the Easy TV-Way* in Texas, and most recently revised and republished as the beginning pages of *Streamlined English.*

In order to present salient features of Laubach methodology in English, the following italicized evaluative criteria developed by the Adult Educational Council of Greater Chicago will be used to analyze *Streamlined English.*[11]

1. *Reality of illustrations:* The Hill family is illustrated by simple pen and ink line drawings with minimum shading and perspective with focus on the essential items of the story.

2. *Controlled vocabulary:* a. *Total number of words introduced:* About 1,300 different words are introduced, based upon the Thorndike-Lorge AA and A list,[12] plus several hundred common words of high usefulness. All regular spellings are introduced as based on a count of the 7,500 most common English words. Only two diacritical marks are used. b. *Rate of introduction:* Each word is repeated at least five times. Many words are repeated much more often. Only one new vowel is introduced in each chapter.

3. *Controlled sentence length:* Sentences appearing early in the series are about four words long. An attempt is made to keep sentences in the later chapters between twelve and 20 words. Two

or three new sentence patterns are introduced in each chapter.

4. *Controlled paragraph length:* Single sentence paragraphs are used. In the later chapters paragraphs have between seven and twelve sentences.

5. *Number of words on page:* In the early chapters the UNESCO suggestion of a maximum of 50 words per page is followed. In later chapters the number of words varies from 100 to 250.

6. *Sequential treatment of basic skills:* Beyond the early stage of teaching basic reading skills in the introductory chapters, numerous topics are sequentially introduced; some of these topics are health care, consumer education, letter writing, transportation, sight-seeing, community centers, and the P.T.A.

7. *Reinforcement of learning:* Particular attention is paid to feedback and reinforcement in *Building Your Language Power.* In the *Streamlined English* series reinforcement of learning is provided for the learner through a series of review chapters spaced systematically every three chapters and including in closure style a review of the materials previously read.

8. *Adult interest level:* An attempt is made to include topics of an adult nature. *Streamlined English* has also been used with children: the remedial and the retarded. Examples of adult interest topics have been listed under point six.

9. *Recency of publication: Streamlined English* was first published in 1951 and revised in 1955. A new revision is now underway which will greatly extend the *Streamlined English* series. This publication is due in 1966.

10. *Presence and quality of written exercises:* The workbook version of *Streamlined English* appears in *Building Your Language Power.* It is also used as explained under point seven. Reading exercises and tests are presented in *Lesson Plans for Streamlined English.*

11. *Presence and quality of comprehension exercises:* The comprehension exercises as used orally are described in the two guidebooks for teachers of *Streamlined English.* The more exhaustive is *Teacher's Manual for Streamlined English.*[13] Another guidebook intended primarily for the nonprofessional is *Lesson Plans for Streamlined English.*[14]

12. *Orientation of materials:* The material is primarily urban, but

there are references to rural life and to such international topics as the atomic bomb.

13. *Presence and quality of teacher's manual:* See point eleven.

In addition to the Ladder of Literacy concept in English as developed in the *Streamlined English* series, two additional kinds of Laubach materials have been prepared. The first is a weekly newspaper, *News For You,* prepared (as of September 1965) on two levels of reading ease.[15] This serial publication is complemented by the second kind of material, a series of adult basic education paperbacks. Sample titles are: *Trouble and the Police, We Honor Them* (stories of twenty American Negro leaders), *How to Find a Job,* and *Why You Need Insurance.*[16] The Laubach materials system in adult basic education, recently mentioned in the June issue of *WLB (p. 885 ff),* has been introduced into the North Carolina state adult basic education program. In addition the Laubach materials system is being used nationwide. These materials, along with others, are described in the annotated bibliography by Jeanette Smith.[17]

For the first time a public library has initiated a teaching program of adult basic education under library sponsorship. This program has been described in the newsletter of the McIntire Public Library, Charlottesville, Virginia.[18] Librarians as individuals have taken part in literacy workshops and literacy councils. In Alabama adult basic education programs were held at a local library. In Cleveland, New York, and Montgomery County, Maryland, special shelves of adult basic educational materials have been arranged for distribution.

Laubach methodology has evolved during its first thirty-seven years. The Laubach materials initiated in the Gold Coast and now used in the modern Ghanaian plans for total literacy, are a testament to the widespread government use of the Laubach method. The prophecy of C. O. Houle seems appropriate as a goal begun in the Philippines and spread worldwide by Frank C. Laubach: "The improvement of reading and writing must be approached at successively higher levels to reinforce and add to basic skills, until finally the individual is equipped to achieve a good life for himself and his family, and the nation is knit together by that sense of the larger community which only print can finally assure." [19]

FOOTNOTES

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THE AUDIO-LINGUAL APPROACH AND THE RETARDED READER

by Jack B. Krail

A great deal of time, effort and money is currently being extended on the construction of reading materials for adults of 18-19 who are reading between the third- and sixth-grade levels. By far the largest part of this group comes from homes in which reading is at best passively discouraged. Most of these homes are almost entirely (if not, indeed, entirely) without books. Many of the children have access to no more than their school texts and perhaps to a tabloid-type newspaper. Too many of the texts used in classes are so unrelated to the actuality of daily life that reading them often becomes an exercise in frustration.

These children do not see their parents read, and, certainly, their peer-group culture is often an active deterrent to reading. In short, nothing in the out-of-school enviornment of these boys and girls encourages them to read. And yet, unless they do begin to read at a rather early age and unless they continue reading in order to develop this skill, they are almost certainly doomed to failure in their school work and to the harshly abrasive consequences that follow: unskilled labor, or, more probably, unemployment. The foregoing is not meant to imply that failure to acquire the reading skill is the only factor that prevents these potentially retarded readers from leaving the slough of the disadvantaged, but a pretty good case could be made for this being practically a *sine qua non.*

One aspect of this extremely acute problem is the vital importance of the age at which the child starts to read. To digress for a moment: it appears to be a fairly well-established fact that very young children can learn a second language with astonishing ease and rapidity.[1] Of course, the ideational content and the lexical range of a child's speech in a second language may be infantile, but the point is that he does master the phonemic and syntactical

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patterns of the new language with amazing facility. As the child grows older, however, his ability to perform this difficult feat with similar ease becomes blunted. We all know how onerous a chore it is for most students in high school to learn a foreign language. All of us remember how desperately we, as young adults, struggled with the intricacies of French pronunciation or German declensions during our freshman year at college. Yet, these same matters were not intricacies at all for a child a dozen year our junior. It appears that unless we learn our first foreign language at a given moment in our span of maturation, the ability to learn easily (one is almost tempted to say "naturally") is very nearly lost.[2]

Returning now to the subject of the reading difficulties of our young adult group: could we argue by analogy that their ability to learn how to read has become blunted and even, because of the largely negative effects of some new factors discussed below, nearly atrophied? Reading entails more than mastering several complicated motor skills. If what we do is to be called "reading," an intricate process (much of which is still not understood) of relating graphemic symbols to referents through perception, cognition and conceptualization must take place. There may be reason to believe that these various skills must be developed at a very early age and then constantly expanded through intensive practice if they are to serve as the lasing tool we call "reading." Unless a person continues to read, he may lose this particular skill just as we have nearly lost our command of Latin or German or French through lack of practice. It can be argued that skills are not static; either we become more adept in performing a given operation or else we start to lose this particular ability. In the case of reading, the loss may be accelerated because a whole series of new factors arise and exercise a negative influence. In many cases, after we pass the propitious moment in our maturation, the effect of these new factors renders the task of learning to read nearly impossible unless the most expert assistance is provided.

Among these new factors is the attitude of the learner. The child–and then the young adult–gets the notion that he can do without this skill: often, no one has really demanded that he read well and continue to read. As he matures and, far too often, becomes a drop-out, he really has no incentive to read. Then, as the skill has become blunted, and its reacquisition ever more difficult because of maturational and emotional factors, he becomes increasingly averse to putting forth the tremendous effort necessary to overcome these handicaps. Added to this are two other matters: the deadening effect that failure to read has had on his progress in school and the attitude of too many teachers who simply pass him on to the next grade in order to get rid of him. This may be far more important than we realize, for it is usually from his teachers, not from his out-of-school environment, that he must receive awareness of the fundamental importance of reading. It is all very well to speak of "self-motivation," but we can argue that someone, somewhere, somehow must convince the potentially retarded reader that he must expend effort on the task and that an active interest is being taken in his progress. The retarded reader did not start as a retarded reader; he became that way because of a whole series of negative factors, many of which were beyond his control or could have been effectively canceled by timely measures.

There is yet another important element which appears to have some bearing on the problem of reading retardation. The phenomenon of "inner speech" or "sub-vocalization" has been quite fully identified and described.[3] It is possible that unless the reader subvocalizes to some degree as he scans the page, the graphemes remain no more than a series of near-meaningless squiggles. (Of course, the deaf learn to read, but usually they learn to read after they learn to speak. Moreover, the deaf ordinarily receive more individual attention than do "normal" children who fail to learn how to read. This probably overcomes the physical handicap of deafness). If the graphemes have no connection with phonemes, with significant sounds that the reader can pronounce readily, then one consequence could be the transposition of printed letters as a person reads and the resultant inability to distinguish between, for example, "nap" and "pan." In the case of longer words, the retarded reader finds himself at an even greater disadvantage, for there he encounters many digraphs and silent letters. Since this young adult has not developed his reading skill, he finds it exceedingly difficult to subvocalize, thereby sounding out a word, unintentionally isolating its root and "guessing" at its meaning.

When polysyllabics are combined into the formally organized, structurally complicated sentence (as opposed to the looser oral utterance), the task of reading becomes even more onerous. Through lack of experience with printed "sentences," the retarded reader is able to comprehend only the simplest type of English structure: minimally-modified subject-verb-object types. In his environment (as in most of ours), he tends to confine his speech to this type of structure. If he wishes to qualify or modify any element in the structure, he generally does so by means of another simple sentence, by using a conjunction (usually this is a juncture or an intonation pattern. The two latter devices have the effect of breaking up complex structures into a series of simple phrases. When he must read, however, he immediately encounters modifiers and clauses of various kinds, compound verb forms and other similarly complicating elements. Add to this a near-total graphemic absence of juncture and intonation indicators and his problem is usually enough to cause him to abandon the task of reading entirely. In effect, he has encountered what amounts to a foreign language, and he is faced with the same type of interference as is the student who starts learning a second language too late. His linguistic habits have become so firmly fixed that maximum interference by his habitual ways of perception makes acquiring a new set of habits a task demanding the utmost concentration and effort.[4]

Such then are some of the problems that face the retarded reader when he is required to re-learn or develop a skill that has been unused over a period of years. Unless the strongest possible motivation is present and unless he can be furnished with materials that are written specifically for his group, it is little wonder that he will remain a retarded reader. The solutions to all these problems are not simple. The most obvious way to avoid the entire dilemma is to prevent a child from becoming a retarded reader. But what about the person who has slipped through the fingers of the school and now finds himself required to learn to read? It is this group that presents the greatest difficulty. What follows are no more than a few tentative suggestions for assisting these young adults.

First, should new word lists based on oral rather than printed English be constructed? These new lists would be of the same type as *Le Francais fondamental:* there would be at least two levels *(dégrés)* and they would be of such a nature that the learner could, by using reading materials based on these lists, proceed from the spoken to the printed language.[5] These lists would contain many root words and very few polysyllabics. As the reader mastered this first list (in the context of new reading materials, of course), he could be exposed to progressively more complicated lexical items, but items which would still include many of the words from the new list as a semantic root. The advantage in using this kind of list rather than one based on word counts from printed materials is that the oral list would contain items with which the learner would be familiar phonemically. Thus, he could make the transition from phoneme to grapheme and vice versa through the medium of items that he knows and that he uses or hears used every day. Another advantage of materials constructed from this type of list is that people talk about things that interest them. By definition, a word list based on oral rather than printed word counts would include at least a fairly large percentage of items reflecting the interests of many readers. Sub-standard forms would not necessarily be included, although a good case could be made for having at least some of the more common ones on the list since our object is to go from the known–the phoneme–to the unknown–the grapheme. Once the connection between grapheme(s) and phoneme has been made, the sub-standard items could be dropped. The presentation of materials based on this kind of vocabulary list would entail using some of the audio-lingual techniques currently employed in teaching modern foreign languages. This brings us to a second tentative suggestion.

Audio-lingual techniques stress the progression of language skills in the order of hearing (comprehending), speaking, seeing and writing. During most of the first two levels of his foreign language study, theoretically a student says only what he has heard and comprehended; reads only what he has heard, comprehended and said; and writes only what he has heard, comprehended, said and read. One basis for this type of presentation is that the phonemic patterns of the language under study must be at least very familiar to the learner before he sees the graphemic representation of the language. If he sees a printed page of French, for example, before he is able to vocalize properly what he sees, a tremendous amount of interference by the native language will take place since he will attempt to pronounce these seemingly familiar graphemes and digraphs as though they were English.[6] Of course, there will always be varying degrees of interference, but some significant studies indicate that presenting a target language in the order specified above reduces this to minimal proportions.[7]

Another basis for the audio-lingual presentation is that reading appears to be mastered more easily if the student can sub-vocalize (sound out words) correctly and hence supplement. In part, and *only* in part, supplementation is the ability to deduce the meaning of lexical items from the linguistic and semantic environment in which they occur. The ability to supplement depends to a large extent, at least through the first two levels of secondary foreign language learning, upon the student's skill in sounding out words.

But he must be *taught* how to sound out what he sees, and it is precisely here that the audio-lingual technique might prove useful in working with retarded readers. Before a student is permitted to see a reading selection (usually a dialog), he memorizes the material by having it presented to him through what is called the mimicry-memorization or "mim-mem" technique. In this technique, the teacher introduces the dialog briefly, giving the students its contents to familiarize them with what they are going to hear. This "equivalency" is presented in simple terms: much use is made of gestures, sketches, drawings, etc. After the students understand what they are to hear, the teacher reads the entire dialog once. Then the equivalency is reviewed. Next, the teacher presents the material line-by-line or phrase-by-phrase with the class repeating chorally, in groups and finally individually.

In a foreign language, usually no more than 6-8 lines can be presented during any mim-mem session. In English, perhaps one complete short dialog could be presented during a single period. Review of lines being memorized in cumulative; that is, after line five has been memorized, the entire selection up to that point is repeated by the class. Unless this is done, students forget quite easily what has gone on before. When we teach a foreign language, we usually spend threee to five days on mim-memming a single dialog. Those parts of the class periods not spent on this activity (and the attention span for mim-memming is rarely more than 12-15 minutes, even with older groups) are devoted to various other drills which do not enter into this discussion of working with retarded readers.

Usually, while the class is memorizing dialog five, it is also working on the syntax, etc., of dialog three. More pertinent to our discussion is the fact that the students are also reading material based *entirely* on the lexical and syntactical content of previously learned material. The point is that they are not permitted to see a dialog or any material until it has been practically memorized. In the early stages of this type of presentation, the student reads review paragraphs called "recombination reading narratives" which contain only those lexical items and structures that have been learned by heart. As noted above, the object of all this is to make the connection between phoneme and grapheme solely through the presentation of lexical items that the student can vocalize correctly.

Could a variation of this same technique be used in our classes for retarded readers? Of course, the presentations would be abbreviated to some extend, but the basic method of having students read only what they have memorized in the context of a dialog would be retained. In working with retarded readers, we would not have to wait several days before we have the students read what they have memorized. We could spend one period mim-memming a new dialog, start the next period with a brief review of the dialog (the usual choral, group, and individual presentations) and then go directly to reading. As soon as the teacher is reasonably certain that everyone has memorized most of the dialog and can pronounce every single item therein he should distribute a copy to each student. In foreign languages, we often have this material mimeographed or xerographed in order to keep the book out of the student's hands and prevent him from attempting to read what he is not able to pronounce.

In working with retarded readers, the same procedure might be used in order to present our material in the exact sequence we desire and to sustain interest in forthcoming selections. As soon as the dialog has been distributed, the teacher should read it to the students while they follow silently. Then they should be asked to read aloud: chorally, in groups, and finally as individuals. It is of crucial importance that the reading be made to resemble actual conversation as much as possible. One group should read the first role, another group the second, and so on. When individuals read, they should read in pairs, one student reading his part to another who responds to him.

The next step in this type of presentation could be using what are called "interference drills." The object of these drills is to attach phoneme to grapheme or, more exactly, allophone to grapheme and vice versa. For instance, the teacher might decide to work with the phoneme /f/; his task now is to attach this phoneme to the grapheme "f" and the digraphs "ff," "ph" and "gh." He could ask how a particular word is pronounced, one with a single "f" in it. After getting the answer, he could ask what letter stood for the /f/ sound. He should have chosen a word with the most common graphemic representation of this sound, one written with a single "f." When the class tells him the letter "f" stands for the sound /f/, he should write the entire word on the board, underling the "f." Then he should ask the class to pick out other words with this same sound in them. If the dialog has been well constructed, there should be several words with "ff," "ph," and "gh" in them. There might perhaps be words with the silent "gh" in them (e.g., "though") for purposes of contrast. As the class isolates words containing this sound, the teacher should write the words on the board and have the class enter them in their notebooks. Each graphemic occurence of the phoneme /f/ would be underlined. Then the teacher should induce the fact that /f/ can be reproduced by "f," "ff," "ph" or "gh." The final step might be to distribute a list of words, some with and some without the graphemic representation of /f/ in them and have the class tell which words contain this sound. As remarked above, the entire object of this drill is to get students to attach phonemes (allophones, at times) to graphemes, and then graphemes to phonemes or allophones. If the experience we have had in teaching foreign languages if valid here, reading might be learned or, in some cases, relearned quite rapidly. The process of relating phoneme to grapheme and vice versa through the medium of known materials could provide a basis for being able to subvocalize and possibly read new (i.e., non-mim-memmed) matter.

After the students have mim-memmed and read several dialogs, they are ready to proceed to the reading of "recombination narratives." As noted above, these are short paragraphs in which only previously memorized lexical items are used, but these items are drawn from several dialogs and the mim-mem approach is not used. In the first recombination narratives, sentence structure is exactly the same as that of the dialogs, but as the course continues, patterns become more complex and the number of lexical items used increases constantly. The object is to instill the ability to make the transition from the easily-followed structures of the dialog–that is, of the spoken language–to the more complex types of sentences found in the printed language. Clauses, phrases, compound verbs, and other types of complicated syntactical devices are gradually introduced until eventually the student is reading material that is quite similar to that encountered in the more popular magazines.

It is important to note here that though syntactical patterns increase in complexity, no new lexical items are introduced until after the student has shown that he is able to handle the new structures. If new (i.e., non-mim-memmed) lexical material is introduced too early, students are faced with two difficulties at once. It would appear simple to explain new words before the student sees them in print, but we must remember that many of these young adults have very short memory spans, and words that may appear easy often present unsuspected difficulties. In the early and perhaps even in the intermediate stages, the practice of relating all lexical items to the environment of the learner must not be abandoned, although it might appear desirable to use additional words to increase vocabulary content. However, we must not lose sight of the principle on which this technique is based: we should proceed from the known (mim-memmed) to the unknown (new structures) without complicating the learner's problem in any way whatsoever.

The narratives can be handled in several ways. The teacher might read the narrative to the students before they see it, pass it out, have them follow silently while he reads to them again, and finally, have them read it. When a student reads aloud, particular attention should be paid to intonation patterns and juncture. If a student uses the correct inflection when he reads and if he pauses at commas and other punctuation marks, there is a strong probability that he understands what he is reading. At this early reading stage, comprehension should probably not be tested in a formal manner: the important point is to assure ourselves that students are making the correct grapheme-phoneme relationships. However, as soon as the teacher is certain that the class has mastered this skill to a reasonable degree, comprehension must be tested. Here, the usual techniques are used: oral questioning, multiple-choice items, matching type exercises, etc. In the printed tests of comprehension, we must be very careful not to introduce new lexical items or structures that are more complex than those in the selection being tested. This is especially important since validity of the item as a test of comprehension is destroyed if the student is unable to puzzle out a new structure or understand a word.

Preceding the growing complexity of the narratives, the dialogs in their turn should have become longer and more complicated structurally. The principle of familiarizing students with a pattern through oral presentation before it is seen should be observed as long as possible. With the longer dialogs, mim-memming might not be necessary, but the students should have the material read to them and they ought to repeat it at least once before they see it. The dialogs would still be the only vehicle through which new lexical items are introduced. Moreover, a lexical item should be used at least three or four times in each of two successive dialogs before it appears in a narrative. Great care must be exercised to make certain that new items are used in the same way in both the dialog and the narrative. For example, if we use the word "block" as a noun in a dialog, then this word should be used only as a noun–not as a verb or part of a compound–in a paragraph until the reader is quite familiar with its first function. Later, of course, new functions of known items are introduced, and they are used in compound forms and with various affixes added to them (e.g., nouns are used as verbs, adjectives are changed to adverbs, etc.). But we must be constantly aware of the limitations of our group and proceed with almost painfully small steps.

At noted above, the entire object of this rather roundabout process is to teach the student to connect phoneme to grapheme, to handle increasingly complex structures, and finally to recognize and understand known lexical items in unfamiliar surroundings and in unfamiliar forms (e.g., as part of a long qualifying device or hidden by the addition of affixes). Retarded readers must be *taught* these skills; this knowledge does not come "naturally," nor is it assimilated simply by being exposed to complicated material.

There are various techniques available for teaching these skills. One of the simplest (and probably least sound, psychologically) is to explain to students exactly how to get at the meaning of a complex structure by analyzing it for them and then having them analyze succeeding similar types of sentences. A better method, perhaps, is to start with a simple sentence and gradually have them build it into a complex one through the addition of one phrase or clause or even a single adjective at a time. In this kind of work, the student can see exactly how each accretion changes meaning and how to get at the heart of the sentence.

As far as vocabulary items are concerned, the same kind of operation can be performed. A simple, known word is isolated, used in a simple sentence, changed through the addition of affixes, used in several different ways, and the class deduces its use with each change. Then the process is reversed: students are presented with a complex lexical item whose root is known to them and they reduce the word to its known root by stripping it of its affixes. Through such a process, the meaning of polysyllabics can be clarified and, in the process, students are being taught how to analyze new lexical items for their meanings. Eventually, of course, the expectation is that through much practice the retarded reader will get the "feel" for language that permits him to read without stopping to analyze. This "feel" does not appear to come to a student, however, unless he is systematically taught some kind of analytical procedure that provides him with guilde-lines for later habitual action.

It might appear heretical to suggest this, but I believe that any emphasis on speed in the elementary or even intermediate stages of reading courses might destroy the nascent ability to handle increasingly complex lexical and structural material. If students are led to believe that reading rapidly is a primary objective, they might get into the habit of skimming before they are ready for this skill, and the problems of reading without comprehension could become acute. Skimming is a desirable technique for the good reader who has formed certain patterns of habitual action, but for the retarded reader, this type of activity very probably would lead to overlooking shades of meaning and skipping over words that are not readily comprehensible.

Speed, therefore, should be placed very low on the list of objectives in any type of work for the retarded reader. The emphasis should remain on making phonemic-graphemic correspondences and on increasing his ability to master the lexical content and syntax of printed utterances he has heard and said. As he becomes more familiar with this type of material, his comprehension increases and faster reading follows almost naturally. The reason for the latter development is obvious: the more often we perform a certain operation with full cognizance of what we are doing (Piaget's formal operations), the more skilled we become and concomittantly, the more rapidly we can perform it.[8] Eventually, some type of speed reading techniques may be taught, but this aspect of the problem does not fall within the scope of these observations.

The process of teaching reading through the use of dialogs and making phonemic-graphemic correspondences through known lexical items is a painstakingly slow one. It might appear that it is indeed too slow and that short-cuts might be used. I believe, however, that if any attempt is made to hasten the process by omitting steps or curtailing the time spent on any of the activities described above, the teacher will very probably feel that he has lost his class. In essence, working with retarded readers requires us to make speed by working slowly, and this to an optimum degree. After all, we must overcome the deficiencies resulting from many years of neglect and negative conditioning. These cannot be remedied in a week or in a month if we wnat to lay a firm foundation for developing a skill that must become a tool of lasting utility.

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PITMAN ITA REMEDIAL READING PROGRAM FOR ADULTS

by Vera L. Hannenberg

The first Initial Teaching Alphabet Remedial Reading Program for adults was instituted in March 1965 at the Brooklyn Adult Training Center, New York City. At that time there was no precedent, no tried methodology, and no adult reading material. Nor was there a clear conviction about the efficacy of such a program or its future direction. The only similar program was the experiment with recruits which had been undertaken in the British Army some months before. However, the newness of the British program made its course as uncertain as ours. In the British program, the child-oriented materials were augmented by army directives and orders transliterated into the Initial Teaching Alphabet.

Since the first twenty adult trainees were assigned to i/t/a remedial reading at the Brooklyn Adult Training Center, we have learned much and have made great strides in establishing an adult reading program. To a large extent, youth and adult i/t/a classes in the Manpower Development Training Program are taught with vocationally oriented teaching and reading material. Participation in the i/t/a program is limited to those trainees whose reading score is third grade or lower. Trainees are placed in small classes in order to achieve maximum remedial benefits in the shortest period of time.

Success with i/t/a remedial reading at the Brooklyn Adult Training Center may be measured by higher reading scores, greater ability to solve mathematical problems, progress in shop classes, more effective counseling sessions, and improved self-evaluation. Trainees who have learned to read become aware of their greater potential for vocational success.

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In the Manpower Development Training Program, where prevocational training is the primary goal, teaching and counseling are vocationally oriented. The cooperative efforts of our team–basic education, vocational education, and guidance–are geared toward providing a total rehabilitation service for our trainees.

One of our former trainees has a twelve-year-old son with severe reading problems. She had made remarkable progress in an i/t/a reading class, while he had not progressed in the remedial reading program in his public school. The boy began to share his mother's class lessons and reading material in the evenings. His progress, even with unprofessional i/t/a instruction, was so rapid that it soon became obvious to his school teacher. She reported this to the principal. In an interview with the principal, the mother told him that her son's newly acquired reading skill was the result of the worksheets and reading selections from i/t/a class at the Brooklyn Adult Training Center. She described how her son eagerly awaited his evening lessons and avidly read the selections which she brought home for him.

Causes of Reading Failure

The extend of ignorance about adult illiteracy is reflected in the variety of euphemisms which have been used to describe the adult illiterate. He has been labeled "slow learner", "culturally underprivileged", "culturally deprived", "educationally disadvantaged", and "undermotivated learner". We deplore not only the language used in making generalizations about a large segment of our population, but also the tendency which such generalizations have to stigmatize special groups and divert our energies from the problem of illiteracy. All of these descriptions are inadequate. Some of the trainees appear to be slow learners, while others seem to be very quick and responsive learners. Some exhibit very little initial motivation to learn, while others are highly motivated, to the point of anxiety. Many of our nonreading trainees display impressive artistic gifts, particularly in the graphic arts. While we have made no formal study, it would appear that the proportion of artisitically gifted people in i/t/a classes exceeds the proportion found in the general population. Almost every i/t/a class has had at least one such gifted student.

Most of our trainees are the victims of social and economic ills which have isolated them from the cultural mainstream. In their isolation they have developed a sub-culture of their own in which they have learned to function quite efficiently. This sub-culture is not necessarily a lesser culture than that of the mainstream, but it is different. An exchange between the two "cultures" can only result from an open-door policy. The first step in this direction is vocational retraining for economic independence. Reading is an integral part of this retraining process to build a contextual bridge connecting the two cultures. You cannot teach people to read in a language or life context which is alien to them. The intransigence of the main culture in meeting the contextual needs of the sub-culture has been a major cause of reading failure in our schools. We, therefore, are developing reading material which is helping to provide the necessary contextual bridge.

An often overlooked factor which contributes to the alarming number of reading failures is distorted visual perception. A number of trainees with reading problems displayed symptoms of dysphasia (speech difficulty) and dyslexia (reading difficulty) due to brain damage. Other trainees had problems relating to dominance, especially lateral dominance (motor acts involving preferred use of organs of sight and hearing on the same side). Although the symptoms of lateral dominance in adults can be very deceptive, it may be suspected when there is a consistent pattern. Therefore, much of the methodology which we have developed was designed to cope with problems caused by laterality and other visual perception distortions.

Materials

The material being developed at Brooklyn Adult Training Center is distinctly adult and vocationally oriented. Through much trial and error we have found a contextual meeting-ground. Most of the selections are original pieces, written especially for our trainees, in language that is familiar and on subjects which are related to their lives. The majority are related to vocational training.

In addition to the above advantages, adult material relieves our teachers of the need to apologize for "baby books". We attempt to arrange, grade, and organize this adult material in a teaching sequence based on language frequency. Ours is, as far as we know, the only adult curriculum of its kind. The success which we enjoyed in the early stages, when we introduced language and subject matter which was familiar to our trainees and suited to their vocational needs, clearly dictated the steps which had to be taken. Because the trainees are adult and time is limited in the Manpower Development Training Program, there is an urgent need for the rapid development and testing of new materials and methods.

The adult teaching sequence and the supplementary reading selections are being developed in three phases. The first phase is designed for the total illiterate who has no symbol recognition. The use of vocational terms to build a sight vocabulary is particularly rewarding on this level. The terms provide us with an excellent contextual key and are not, as one might imagine, limiting. Trainees find terms like "car battery" "stalled car", and "carburetor" much easier to recognize and remember than "ride the car around and around the yard", "bat the ball", or "Paul hit the ball".

The auto service trainees found that "fix the flat tire", "can of oil", "the tools on the workbench", "four-door sedan", and "jam on the brakes" were especially meaningful. Similarly, terms such as "pot of glue", "hammer and nails", "claw hammer", "build a table top", "tool kit", and "shop foreman", are not only necessary for woodworking and metal fabrication trainees, but also contain important sound symbols essential for reading. The trainees who had failed to learn these sounds in the child-oriented books were now able to retain them in this more contextually valid setting.

The "linguistic audacity" which characterizes the adult teaching materials, and the speed with which our trainees learn to read adult selections, would have been unthinkable without the aid of the Pitman i/t/a alphabet. The stability which it provides through a consistent sight-sounding relationship liberates the adult illiterate from the burden of English spelling irregularities long enough to develop reading fluency. The ambitious linguistic program which we are undertaking is not only possible but also practical because of the spelling control which this alphabet gives us. We recognize that it is not the function of any alphabet to teach reading. However, an alphabet which provides a reliable sight-sound spelling base can make a monumental contribution to the teaching of reading. The need for such an alphabet in English has been felt for hundreds of years.

In the second phase, the materials, the teaching sequence, and the reading selections are designed for functional illiterates. The reading selections follow the same pattern as those in the first phase, except that they are much more sophisticated and difficult. Good context seems to make even difficult selections understandable for the trainees.

Mots i/t/a referrals at Brooklyn Adult Training Center fall into the functional illiterate category. In our program, most functional illiterates have reliable consonant recognition, a sight vocabulary of between 150 and 200 words, and no reading skills. As adults, however, they possess language skills and experience. We attempt to exploit these very important strengths. These are the "ready for reading" assets which form the base for the teaching of reading skills. While some trainees lack auditory discrimination because they have never learned to read, others have very good auditory discrimination despite this developmental gap. We have found that learning to read is possible for an adult, even when auditory discrimination is poor. But the teaching procedure is altered to capitalize on sight and context where auditory discrimination is lacking. Good reading results are achieved by using an area of strength while developing skill in an area of weakness.

The third phase is the transition stage in which the reading skills acquired with the aid of the Pitman initial teaching alphabet are transferred to reading in traditional orthography. Although there is much concern about the problem of transition, this is the easiest stage of the entire remediation process. There are several good reasons for this. In the first place, the close resemblance between the Caxton and Pitman Alphabets makes the visual transfer relatively simple. Secondly, the trainees are so highly motivated throughout the remedial process that they read as much and as often as they can. The third, and perhaps most important reason for the ease of transition is that the crippling reading disability has been repaired and replaced with a body of reading skills which are essentially the same as those necessary for any effective reading.

Reading skills such as word analysis, sight vocabulary development, and use of contextual clues, all of which have been practiced in reading materials in the Pitman alphabet, are exactly the same skills necessary for reading in traditional orthography. The fruits of i/t/a remediation are enjoyed when students transfer into regular reading classes. All of our teachers have marvelled at the superior word analysis skills of i/t/a students. The insights gained from the experimental teaching of reading to adults in i/t/a classes is now being applied to all the reading classes in our Basic Education Department.

Our original methods and materials are being adapted for readers on the fourth to sixth grade levels. New materials for this intermediate group, following i/t/a guide lines, are being developed. They link the earliest stages of reading remediation with the more advanced in a coordinated reading program.

Methodology

Appropriate methodology and material are mutually reinforcing in remediation. Phonogram combinations and early use of vocationally oriented phrases are the basis of i/t/a teaching. Vowel sounds are never taught in isolation, but rather in a phonogram combination. The short vowel sounds in isolation seem to be too abstract and are mastered more rapidly when taught in combination with a consonant. Combinations such as "in", "it", and "if", are identifiable both by sight and sound. Movement to the less familiar "ick" and "ig" seems to be easier when preceded by sight combinations. When most of the combinations in which the "i" appears are taught and are contrasted with the long "i", the short "i" is understood by inference.

When a combination such as "ig" is introduced, it is shown in the various positions in which it is likely to appear in English. In the initial position, "ig" would be demonstrated in a phrase like "ignition trouble" or "ignorant people." This would be followed by "ig" in "trigger-grip handle." It would be seen in the final position, as in "tig-welding," or "jig-saw." The calculated movement of these sound combinations is extremely valuable in teaching trainees with problems of laterality. The linguistic advantage of the early use of phrases is enhanced by the left-to-right eye movements which these phrases help to develop.

In small i/t/a classes the teacher is able to follow the step-by-step progress of each trainee. Testing facilities make it possible to weigh findings with greater accuracy and objectivity. The standardized reading tests which have been administered include word recognition and timed silent reading tests. On the basis of scores for an eighteen-month period, we estimate that approximately seventy percent of the i/t/a trainees leave Brooklyn Adult Training Center with word recognition skills ranging between sixth and seventh grade. In most cases this represents a four to five-year reading advance within the six-month remedial period. The timed silent reading tests, however, reflect an average of two year's growth in reading.

Case Histories

The following are accounts of several trainees who were helped by i/t/a to previously unattainable vocational and educational opportunities. A young i/t/a trainee with severe laterality has progressed into a transition class. The reading skills which he acquired made it possible for him to become an i/t/a typist. He has typed many reading selections which are used in the i/t/a classes and he may become employable in the highly specialized field of i/t/a typing.

Sarah B., an early i/t/a trainee, entered the program with a grade reading score of 3.4. Upon termination, six months later, her grade level was higher than seven. After an absence of almost a year, she is re-enrolled in the Manpower Development Training Program in another vocational skill area. She has sustained her language arts reading level and achieves perfect scores in spelling examinations.

Edward A. was unable to read ten words on the Dolch test when he was referred for i/t/a reading, despite the fact that he had received a year of private remedial instruction before he entered the Manpower Program. Six months after his remedial instruction at Brooklyn Adult Training Center he was retested and scored about eighth grade level.

Wayne B. was afflicted with severe dyslexia as a result of brain injury. Through i/t/a remediation his reading improved sufficiently for him to be admitted for training as a draftsman. With financial assistance from the New York State Division of Vocational Rehabilitation, he is studying advanced mathematics and drafting and is performing extremely well.

Conclusions

The success at Brooklyn Adult Training Center with the first Initial Teaching Alphabet Remedial Reading Program for Adults was largely attributable to the dedication of the teaching staff. The instructors have personality traits that enable them to establish a high level of rapport with trainees. While the quality of the teaching and the relationship between students and teachers in a remedial procedure are of crucial importance, there are several equally important contributory factors. Even the most dedicated and humane teachers must have the proper orientation, methodology, and materials in order to perform successfully. Remediation is, without a doubt, the most challenging of all teaching disciplines and demands teaching disciplines and demands teaching excellence. Our experience at Brooklyn Adult Training Center has shown that skilled teachers with a wide variety of personality differences can achieve equal success using the same methodology and materials.

This report of the collective effort with i/t/a at Brooklyn Adult Training Center is the beginning of what, we hope, will lead to further progress in eliminating illiteracy.

Addendum–I/T/A Adult Remedial Reading at BATC

As we indicated in an earlier section of this report, the reading improvement achieved by the early i/t/a groups was greater in word recognition skills than in context reading skills. Most trainees advanced three to four years in the word recognition test (power test) and only two years in the timed paragraph reading test (applied reading skill) in a twenty-week period.

In evaluating this disparity in reading achievement advance, it was our feeling that this gap might in some measure be due to the limited quantity of adult reading materials available, and the limited adult reading experience which we were therefore able to provide during the remediational period. What seemed to us to be a major void was the absence of contextually suited reading selections in sufficient quantities to build the sight vocabulary and contextual reading skills which are necessary to maek a competent reader. This caused us to begin a program for the development of new, vocationally-oriented adult materials, in a large variety levels of difficulty. It was our hope that replacing the child-oriented selections with these adult materials would provide our i/t/a trainees with sufficient reading experience to compensate for the short remediational period.

The trainees, whose reading growth is described in the table below, began their i/t/a remediation at the end of June, 1966. Originally, they were divided into two groups of five and six trainees. The adult materials used in our curriculum were developed during the *seventeen weeks* of their remediation. These two groups were the first to complete the remedial reading program on a complete diet of adult materials. However the need for new materials and the revision of those already prepared continues.

Trainee		*Vocational Group*	*Intake Reading Score*	*Spache Silent Reading Comprehension after 17 weeks*	*Spache Word Recognition List 3 after 17 weeks*
1.	B.M.	Merchandising	3.5	7.0	5.5
2.	Th.M.	Machine Shop***	Illiterate-untestable	7.0	5.5
3.	P.W.	Machine Shop	3.5	8.5	6.5*
4.	R.P.	Woodworking	3.8	8.5	6.5*
5.	H.A.	Machine Shop	3.0	7.0	6.5*
6.	S.P.	Metal Fabrication	3.5	7.0	6.5*
7.	Mc.S.	Building Service	3.0	8.0	6.5*
8.	T.M.	Com. Occupations**	2.3	7.5	6.5*

* The Spache Word Recognition List 3 allows for a maximum reading grade score of 6.5. Thirty-three correct answers out of a list of forty yields a reading score of 6.5. All of the trainees who achieved the maximum score on this test answered at least thirty-seven correctly, suggesting that their power skills exceed 6.5

** This trainee exhibited symptoms of severe laterality.

*** This trainee was unable to take a reading test. On admission to remedial reading class he hadconsonant recognition only.

Three of the original eleven trainees left school before the retests were administered and were unavailable to us.

The improved performance of the June trainees in the silent reading comprehension test is, we think, in large measure the result of the adult diet to which they were exposed. In the seventeen weeks of their training they were reading *no child-oriented* or contextually remote materials. As the volume of materials increases, we should be able to provide sufficient quantities of reading selections to maintain an active interest in reading, and to compensate for the comparatively short period of exposure of remediation.

Four of the trainees whose scores are included in this table have declared their intention of preparing for the high school equivalency test. While their new-found reading skills have left them somewhat dazzled about their vocational future, they are all reevaluating their vocational opportunities in light of their advanced skills. All of the trainees have become avid independent readers and library members and have in fact added a new dimension to their living.

PART IV

COMPREHENSION

WHAT IS READING COMPREHENSION? A RESEARCH VIEW

William D. Sheldon

What is reading comprehension? I want to say for the sake of argument that reading comprehension is the ability to interpret what is read and requires a different pattern or arrangement of closely related factors or skills in each of the content fields. The problem in the research to date is that the factors are so closely related they seem to be one, or perhaps two. The two studies which I think are most comprehensive in the field of saying what is reading comprehension are those of Fred Davis done in relationship to the *Cooperative English Test of Reading* and the second the replication of that particular piece of research by Lyman Hunt done under my direction at Syracuse some years ago. Hunt raised these questions: Does the reader in the usual situation use mental functions or processes which are sufficiently different to reflect a described difference? This is the nub of the problem in terms of what Hunt and others have done. And secondly, do individual readers vary in either their ability or proficiency to use described skills of comprehension to such an extent that we can measure them with existing measures? Third, can we assemble groups of items which are true measures of the described abilities or skills? And then lastly, does each item group measure one designated skill in a manner that is significantly different from its power to measure other skills? Whether we can measure the specific aspects of comprehension still remains controversial in the mind of Hunt in an article written recently, and in my own mind.

Apparently Hunt and Davis and others who worked in their field seem to come up with two, or perhaps three at the most, specific elements in terms of the measurement of comprehension in order to describe what it is. The first is an understanding of word meanings or word references. The second is something over-

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all called facetiously by one scholar item X, an eclectric over-all skill which seemed to be important to Hunt and to others but could not be discretely measured. The third element is one that accounted for only 8 per cent of the total variance, not enough to really be called a discrete factor, and that is the matter of organizing ability. Now what this means is that thy person who goes into the comprehending of written material seems to elicit his understanding–and therefore relating to my definition of what reading comprehension is (makes reading comprehension descriptive in a sense)–when he's able to understand the meaning of the words involved, when he has the power to do something with the materials in an organizational sense, and, lastly, has the ability to cause some thinking that might be new or reflective upon the subject to ensue. Perhaps reading comprehension might be described as a goad to replicated thinking or a goad to new thinking on a topic that is either known or partially known.

Some people say that you cannot understand something with which you are totally unfamiliar and that reading comprehension suggests that the reading act allows you to become familiar with materials which you already knew in other ways either partially or wholly. What I'm saying in effect is that there seem to be some masses of understanding, concept-wise, in the individual which become clearly defined in written materials and which the individual now relates to his mass of information through his reading. So reading comprehension might merely be a tool by which a person relates information known or partly known. We know of course that individuals can't have a full knowledge of everything they read, but I suspect that unless they have a fairly adequate understanding, which they gained in other ways, of the concepts involved in the reading, the words which describe those concepts, and an ability to handle the reading matter, then the reading does not have meaning.

Leonard Braam and I have been working at Syracuse with this matter of comprehension around the idea of exploring the flexibility of reading patterns. It seems to us that there are three characteristics which cause people to comprehend at higher or lower levels and these relate to what is comprehension. The first is the avowed purpose of the reader. The second is the difficulty level with the topic to be read. Now I'm going to suggest that the purpose for most the reading done by the children we know is something which is artificially contrived and, like much of education, the purposes derive more from the situation and the teacher than from the learner. I would like to suggest to you that if a person has enough ability or acumen to develop his own purposes for reading that this in itself might be the overpowering factor which would describe what reading comprehension is. In this case the process would determine the effort and the amount of will, in a sense, to pursue material until it was comprehended or understood. Let me give you an example. The best specific related to this is the pursuit of a knowledgeable youngster into a new topic of interest, one that's been presented to him perhaps by television, by conversation, or in some other way. We encounter this in particular in the intermediate grades, when youngsters are interested in such things as space and dinosaurs and the rest. It is virtually unbelievable what these youngsters can comprehend in terms of their measured ability to read in other areas not related to the interest area. When their purposes are such that they will not spare themselves in driving toward understanding, it is incredible what they can do with a relatively limited reading ability. For example, the pursuit of terminology is one of the first steps the young scholar takes. He wants definition. He break down terms which many of us have not taken the time to learn. *Brontosaurus* becomes easier than *cat*, or so it seems. *Apogee* enters the vocabulary more quickly than the word *their*. It seems ridiculous at times, when we consider what purpose will do, that we don't allow the readers' purpose to govern much of our instruction in the area of comprehension. What I'm saying is that purpose which is usually arbitrarily determined by the teacher is not the true purpose about which I'm talking. The purpose here would be the driving motivation of the reader and this would describe in a sense what is comprehension as something that's elicited from the purpose of the reader.

The second is a matter of difficulty level, and here again the astonishing thing is that comprehension is not limited by the student's ability so much as it's limited by his purpose. And perhaps those two things are colimiting. And then thirdly, familiarity. Here we think of comprehension, or what is comprehension, as perhaps the capstone to a clarification of the concepts involved in materials.

So far as I'm concerned, reading comprehension is an illusive state which cannot apparently be so measured that we can adequately answer those four questions raised by Hunt. Let me review them. Hunt's questions are these, and I think they're pertinent to this particular topic. Does the reader in usual reading situations use mental functions or processes which are sufficiently different to reflect described differences–and the described differences here are on the part of the examiner who has labeled different parts of comprehension tests as measuring discrete elements of comprehension. (I want to recite just briefly those parts. Knowledge of word meaning is almost always one. The ability to select word meanings from context is a second. The ability to follow the organization of a passage is third. The ability to select the main idea is fourth. The ability to answer questions directly answered in the passage, fifth. The ability to answer questions that are answered in the passage but not in the words in which the question is asked, sixth. The ability to recognize literary devices used in the passage to get its tone and mood, seventh. The ability to draw inferences about its content is eighth. And lastly, that highly intellectual skill of determining a writer's purpose, point of view, and to draw inferences about the writer himself. Those are the described differences in a sense that Hunt has discovered.) Secondly, do individual readers vary in either their ability or proficiency to use described skills of comprehension to such an extent that we can measure them with the existing measures? A suggestion again comes quite clear: The answer is no. Three, can we assemble groups of items which are true measures of the described abilities or skills? Hunt's and Davis' studies, the two I think are most worth while in this instance, say only to a limited degree. Out of Davis' and Hunt's studies we get two solid discrete items which are not so highly intercorrelated that they measure the same thing. One is word meaning and the other is that quality X which, I would suspect, lies someplace between purpose and need rather than something psychological that we can spell out on a test situation. Then lastly, does each item group measure one designated skill in a manner that is significantly different from its power to measure other skills? Again, the intercorrelation, the factor analysis, indicated that this is not possible.

TEACHERS, QUESTIONS AND COMPREHENSION

Following the categories of questions discussed in the excellent book on this subject by Sanders. This book, *Classroom Questions: What Kinds?* presents its subject in much greater detail than we can here. It will be very profitable reading for any teacher attempting to improve her interaction with pupils, particularly when teaching in the content fields.

1. Memory—recognizing or recalling information as given in the passage. Sanders distinguishes four kinds of ideas on the memory level of thinking:
   (a) facts—
      Who did ____________?
      When did ____________?
      How many ____________?
      What are ____________?
   (b) definitions of terms used, and perhaps explained, in the text—
      What is meant by ____________?
      What does ____________ mean?
      What meaning did you understand for ______?
      Define ____________.
      Explain what we meant by ____________.
   (c) generalizations—recognizing common characteristic of a group of ideas or things
      What events lead to __________?
      In what three ways do ________________
         resemble ____________?
      How did ____________ and ______________
         effect (cause) ____________?

Reprinted from Spache, George D. and Spache, Evelyn B., *Reading In The Elementary School*, 2nd ed. Boston: Allyn and Bacon, 1969. 475-478, with permission of the authors.

(d) values–a judgment of quality

What is said about ________?

Do you agree?

What kind of a boy was ________?

What did ________ do that you wouldn't?

2. Translations–expressing ideas in different form or language

Tell me in your own words how ________?

What kind of a drawing could you make to illustrate ________?

How could we restate ________?

Could we make up a play to tell this story? How?

What does the writer mean by the phrase____?

Write a story pretending you are________.

3. Interpretation–trying to see relationships among facts, generalizations, values, etc. Sanders recognizes several types of interpretation

(a) Comparative–are ideas the same, different, related or opposed

How is ________ like ________?

Is ________ the same as ________?

Why not?

Which three ________ are most alike in ________?

Compare ________ with ________ in ________.

How does ________ today resemble ________ in________?

(b) Implications–arriving at an idea which depends upon evidence in the reading passage.

What will ________ and ________ lead to?

What justification for ________ does the author give?

If ________ continues to________, what is likely to happen?

What would happen if ________?

(c) Inductive thinking–applying a generalization to a group of observed facts

What facts in the story tend to support the idea that ________?

What is the author trying to tell you by ____?

What does the behavior of ________tell you about him?

What events led to __________? Why?

(d) Quantitative–using a number of facts to reach a a conclusion

How much has _________ increased?

What conclusions can you draw from the table (graph) on page ____?

How many time did _______ do _________? Then what happened?

How many causes of ________ can you list?

(e) Cause and Effect–recognizing the events leading to a happening

Why did the boy _________?

How did the boy make ________ happen?

What two things lead up to _________?

When the girl _______, what had to happen?

Why did _________ happen?

4. Application–solving a problem that required the use of generalizations, facts, values and other appropriate types of thinking

How can we show that we need a traffic policeman at the crossing at the south end of our school?

If we want to raise hamsters in our classroom, what sort of plans will we have to make?

John has been ill for several days. What could we do to help him during his illness? To whow him we think of him?

5. Analysis–recognizing and applying rules of logic to solution of a problem; analyzing an example of reasoning

Discuss the statement, "All teachers are kind and friendly."

Some people think that boys can run faster than girls. What do you think?

John was once bitten by a dog. Now John dislikes all dogs. Is he right or wrong in his feelings? Why?

6. Synthesis–using original, creative thinking to solve a problem

    What other titles could you think of for this story?

    What other ending can you think of for this story?

    If John had not __________, what might have happened?

    Pretend you are a manufacturer of pencils who wishes to produce a much better pencil. Tell what you might do.

7. Evaluation–making judgments based on clearly defined standards

    Did you enjoy the story of __________? For what reasons?

    What do you think of ______________ in this story? Do you approve of his actions?

    In the textbook, the author tells us that _____ felt __________. Is this a fact or the author's opinion? How do you know?

    This story has a very happy ending. Should all stories end happily? Why not?

    The author of our textbook apparently believes that the American colonists were right in their actions. Do you agree? Waht do you suppose the British said about the colonists?

    Write a short story about your favorite person in history. Tell why this person is your favorite.

In this, we have tried to provide a depth of background for the teacher who is attempting to improve comprehension. As we have shown again and again, comprehension and critical reading are modes of thinking which are taught by the stimulus of the discussion in the classroom. We did not provide examples of "good comprehension exercises" as most reading textbooks do. We believe that such printed exercises or tests have a place in the development of comprehension, but a minor part to be sure. What we have tried to show is that if employed, such exercises must be used selectively, critically in fact, by the teacher. All too often such exercises sample only the simplest types of thinking, memory or parrot-like recall of details.

Nor can such an approach to teaching comprehension be justified because it appears to enable students to score better on reading tests. The broader concept of comprehension we are suggesting will also accomplish this short-sighted goal, as well as promote the development of comprehension and critical reading in depth.

We intended to present the complete picture of thinking in reading, to encourage teachers to make exercises and tests and ask questions which cover the entire gamut of cognitive processes. Development of any real depth of comprehension or the faculty of intelligent, critical reading is impossible, if we depend upon drill books, workbooks and other stereotyped, repetitive materials. Our goals will be reached only by diversifying ou questioning constantly, and by including on almost every occasion, as many as possible of the types of stimuli to thinking we have outlined above.

THE NEWSPAPER: A NEW TEXTBOOK EVERY DAY

Laura S. Johnson

A basic requirement in the ESEA Title III grant for the establishment of a Diagnostic and Remedial Learning Center in our school (2) last year, was that it be innovative. My part in the program was to work, through language processes with emphasis on reading, on a one-to-one basis with twenty students (all except two of them being boys ranging in age from sixteen to nineteen years) who were having learning difficulties in high school. Their trouble ranged from underachievement to severe misbehavior, and their number represented only a small fraction of that much larger group also having trouble achieving academically. With these few individuals, however, I hoped to evolve a rationale for the selection of materials, and I hoped to work out techniques for using them which could be adapted to larger groups. I believed that maximum effective individualization of reading instruction could be achieved through the types of materials constantly available to students rather than through the number of teachers constantly available to students.

When I began, some of the students, though conscientious and still willing to try, were very discouraged with their past performance; they had just about given up hope of ever having anything good happen to them in school. That they did learn to feel better about themselves and their ability to achieve was summed up by one of them near the end of the year when he said, "At the beginning the picture was pretty sad, but now things are looking up."

Others in the group seemed headed straight down the drop-out trail, unless the pushout trail came up first because of their obnoxious behavior. One of them put it this way when he showed up: "There ain't a rule this school can make, that I can't think of a dozen ways to break."

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Their economic and social backgrounds were varied, ranging from the bottom to the top of the occupational scale. One was Mexican-American; the rest were white. All had average and above-average mental ability. Most of them had attended "good" suburban schools during their elementary and junior high school years. They had been exposed to the advantages considered prime requisites for success in school, but few had "taken." For high school students, all of them were poor readers. On a Triggs Survey Test given when they entered the program, their scores ranged from third to seventh grade reading level; WRAT scores in arithmetic and spelling were correspondingly low. All of them could be expected to have difficulty attaining even nominal success in the structure of the traditionally elite-oriented secondary school; most of them were failing or ready to drop out.

The Detroit Tests of Learning Aptitude indicated perceptual handicaps for all of them. For most, the deficiencies were visual or auditory. Two of them had considerable disorientation. Two were physically immature for their age. And so it went on down the list. As our staff met and discussed the students individually as well as collectively, their problems became more complex the further we went into them because of the emotional overlay of years of failure and frustration piled upon years of educational neglect of their specific impairments. Our staff members became more aware, too, that we were hovering with less distinction over the fine line separating the semantics of Learning Disabilities from what we became more inclined to term Learning Difficulties. Finally our psychologist resolved the problem of identification by saying, "Look! These kids are in trouble. Let's see what we can do to help them and forget about what to call it."

So I did, and took my cues for what to do for them by listening to what they said as they introduced themselves to me the first week of school (it took that long for some of them to show up).

"Don't gimme none of this jazz about readin', unnerstan', 'cause I ain't takin' none of it, ya unnerstan'?"

"If this is some more of the same old hash, no thank you. I'm cuttin' outta this joint anyway–before the Dean throws me out. He says he's lookin' for an excuse; it ain't gonna take me long to give him one."

"Who needs to read? I say, Babe, keep your eyes and ears open, and you can get along."

"Read a book? Why should I? The good ones are made into movies and they're a whole lot easier on the eyes."

"My counselor is an old ***. She says I'm stupid 'cause I can't read."

"You want to know something? I'm going to slit that *** teacher's throat if she asks me again, 'Where's your book?' "

Innovate?

What else could I do?

Whatever happens, I thought, it must not look like school or sound like school. But it must open up again the chance to learn, and it must arouse a willingness to learn. I must understand the desperation, the boredom, the ignorance, the bravado, and the hostility which their words express about the school's impact upon them. What in it felled them, I wondered? Where, along the way, did proportion get lost? Was it the school or their dear families, or both, that failed to show them, like the elephant's child in the *Just-So Stories,* the fun and the fact in learning? It was too late now for this, but perhaps something else would work. So I plunged into the jungle around me and searched for what might help this yowly, scowly bunch lacking in manners and with their curiosity not showing.

I began with a local, tabloid-sized morning newspaper, the *Chicago Sun-Times.* It was right for this group for many reasons. For one thing, it did not look insulting. The students were not ashamed to walk down the hall with it under an arm or on top of a pile of books. It was not, as one of them said when he disdainfully pitched a workbook from another class into my wastepaper basket, "Kid stuff!"

The newspaper was good, too, because it looked fresh and easy to handle. It kept the reading process from seeming "too big," "too complicated," "dry," "boring," "stupid," or any of the other adjectives a high school person wouldn't be caught dead with. The day's newspaper appealed to them also because it was related to what they already knew. They'd got some of it from the 10 o'clock news the night before; they'd heard Johnny Carson talk about it on his "Tonight Show"; their favorite DJ worked it in while he switched from The Cream to Jimi Hendrix.

Also, for high-interest, easy-reading, the staff downtown in the *Sun-Times* office could always be counted on to furnish that touch of professionalism the kids expected in every phase of their living, for television has brought them up on it, and they turn off on anything that doesn't come up to the same sleek standard. Also, where for four cents can you get such an unbelievable windfall? You think you must be dreaming. But what a dream! Stacked, bundled, wired—you find it waiting for you every morning you enter the school office and prepare to face your students that day. The only thing that bothers you is that this feast should be available for the hundred kids who need it rather than the few who will get it.

The newspaper we used always had at least one eye-catching picture on the front page; sometimes it had two. A big, one-inch headline slammed the main story right into the eye. Smaller, half-inch heads on page two kindled curiosity on other major news events. Clear directions led further into the paper when a story was continued, thus exposing the students to additional happenings.

Mike, caught by an item on Khe Sahn on page one, inevitably continues to "Story on page five" because his brother is in Viet Nam. When he finishes this, he finds right next to it an article about the possibility of higher rates coming up for the tollway. Mike reads that too because he drives a car, and all the costs come out of his pocket. Abe follows the missile crisis on through "Report on page four" because his grandfather lives near Libertyville, and no one in their family wants an ABM site that close. This item ends just above another about an eccentric who has 23 cats, which brings a snort from Abe: his step-mother has three Siamese, and he hates all four of them. Sam, a guitarist, gets carried away by "See page 17," where he reads about the 50,000 persons who turned out the night before to hear the Jefferson Airplane in Grant Park. Sam's eye is pulled further on to a nearby column where he reads a social worker's complaint about the inadequacy of the welfare program. Sam sighs; he has been hungry too.

The newspaper stirs up a lot in these three boys as they range freely through it the first half of the period every day. Each boy avidly reads what appeals to him; he responds to it; and he moves on to read some more, to respond again—to awaken, he eventually realizes, to words, to thought, to organization, to communication—first with himself and then with other people.

Though each of these students needs some very elementary and repetitious drills for building up strength in his own perceptual weaknesses, none is motivated enough at this late point in his schooling to take them on. To present these bald exercises to them now would be to turn them off on what I might be able to stir them up to do for themselves. So I approach them through something they will take, and I adapt it to what they need.

They take to the newspaper because it appeals to them personally in its awareness of what is going on today and because of its ability to change when tomorrow comes. It is not dead or frozen or stuck or creeping. It is alive and jet-propelled. Television, speeds of 25,000 miles per hour, trips to the moon, pictures of life (?) on Mars—this is the perceptual level of newspapers and students today; both "feel" to *Apollo 11,* not the *Santa Maria.* Students to not even see or hear the blank look and the dull pace of the hard-covered textbook which is one, two, three, or five years old. Their time is now and tomorrow— not yesterday or last year.

So they will read, listen to, and look at what's new and up-to-date. It is only *after* they have accepted this, and *after* they have some kind of "readiness" appropriate to their age and interest that they are able to start asking questions about what came before. It is only then that they will want to turn to the kind of reading which supplies in-depth answers, which gives them the relationships they as human beings instinctively seek. It is then that they find reading to be a way of life rather than just a subject taught with "package deals." Once they discover the thrill of making their own connections through reading, they will not stop. The path which begins with Ann Landers' daily column in the newspaper can widen into the broader expanse of *Mr and Mrs. BoJo Jones,* and that can elevate to the vista of *The Scarlet Letter.* For the poor high school reader, a sequence like this is absolutely necessary, even as we recognize that he may never be able to go the whole way. But to begin with the book which should be the culmination is to ruin the entire thing.

The boys whose bag is sports know where to start. They begin on the back page of the newspaper. For them, what the President said yesterday is nowhere near as important as what big Lou scored last night on the basketball court. For the sports lover, the newspaper is customized reading right down to the last percentage point: readiness, motivation, and content are all tailored exactly to their demands.

When their favorite hockey player's jaw is busted in the game between the Hawks and the Canadians, the boys get a sustained look at the fracas through the photographer's blowup. With no outside prodding, the fellows jostle each other for a chance to read aloud the thrilling story. I never have to squeeze interpretive analyses out of this group: the phenomena simply exude.

"What a guy! His jaw is going to be wired shut for eight weeks."

"How do you s'pose he's going to eat?"

"They'll think of something. They sure as heck won't let a million dollar guy like that starve to death."

"You know what? I betcha he never misses a game."

"Good old Bobby! Ain't he the greatest!"

At first none of them believed that a newspaper was going to be their textbook. They were skeptical. They looked for the catch. They braced themselves for the yank of the rug. But by the end of the first week, the old-shoe comfort of a newspaper began to produce the relaxing effect they had to have to get on with the business of finding out what else they wanted (and needed) to know. Finally, and with nothing said about it, they knew there wasn't any catch. This was for real. The whole thing was just as good as it looked.

They liked the period in their school day when they could come into a room, sit down, pick up a fresh newspaper, and know it was theirs to do with as they pleased. They could read it, talk about it, write about it, cut it up, tear things out of it, take it home–such personal freedom with print existed nowhere else at school, and often not at home either–it was wholly theirs. When someone saw a news item that struck him as good, he'd say, "Hey, listen to this," and then read it aloud. When he came to a word he did not know, he spelled it out and someone told him what it was. I made a note of these words so that they could be written on the board for analysis and discussion after the reading was finished and the conversing had begun.

We did a lot of talking in these classes, for they were small, ranging in size from two to four persons. We discussed what they wanted to talk about. News stories usually triggered into the open some personal topic, for the boys were centered around themselves rather than the outside world. If this seems immature in view of their age, consider their years of lack of contact with the ideas of other people, ideas to be obtained mostly through reading which they have not done. These students have missed a great deal during their years in school; they are minus whole chunks of life because they lost out on the access to it back at the beginning, when they made their first contact with the school and their problems in learning were not identified.

So the high school student with a learning difficulty characteristically begins a discussion with a gripe–about the school, the principal, the Dean, the library, some "other" teacher, his father, his mother, a brother, a sister. Rarely, however, does he gripe about his job or his girl. At first I wondered what the reason was for this sharp division between what he liked and what he didn't like in his personal relations with people. As I listened to his increasingly articulate discussions, I realized that the difference for him lay in whether he could choose what he must like and work with, or whether it was thrust in front of him and someone said, "Baby, you take."

So he gripes about the people he is stuck with at home and at school. He feels that tradition and structure lock him into places he can't get out of. He says one thing that would help would be more freedom of choice. When he can't have this, he feels the home and the school are not on his side, so he fights everything that comes from them. In areas such as girls or jobs, he can choose, so he is satisfied. Considering his position, I see that his independence of spirit can be tapped to advantage, so I resolve that at least in his reading class he will get a chance to choose what he will read.

It was amazing to see how helpful an inexpensive item like the newspaper was for those tied-up, poor readers. Title III paid for their papers during the year of experimentation. Next year's innovations at the Diagnostic and Remedial Learning Center will go in another direction. So the school administration stands at the end of the school year at the point where it needs to decide whether the newspaper is a worthwhile way of reaching and teaching students such as those I worked with. Should the school spend money for newspapers? It hasn't done anything like this before. Or should it spend money repairing washrooms that have been wrecked by cherry bombs? It has done this before. The answer lies, of course, in discovering the students' reasons for coming to us. What are we supposed to be doing for them? Through an informal inventory I gave the students the first day they entered my class, I obtained an insight into their language background as well as into their reading interests. Most of them were as non-verbal and as hostile toward each other as they were to me. My first night after my first day with them was a busy one, but it resulted in a second day which found each student in a setting of newspapers, magazines, and paperback books strongly reflecting his personal interests. The girl who had stormed in on Day No. 1 saying nobody could make her touch anything to read walked out on Day No. 2 with a copy of *Ingenue* under her arm because she just had to try the hairdo's on page 54.

A similar accepting experience occurred with the boy who would not even come in and sit down the first day. "I ain't readin', period," he said, and then he just stood in the door, looking at the clock out in the hall for the entire 45 minutes. Head stock boy in a large supermarket with its thousands of items, I knew he was bright even though he swore he'd never need to know more than how to read cans.

So on his second day with me he got an envelope filled with the cut-up pages of his company's weekly newspaper ads. I asked him to reconstruct the layouts. To prove how well he knew his stock, he did the whole job in record time, right down to the last can of pears.

We went on from this to become friends, and by the time school was out, he had read enough in the newspaper about campus riots and other school problems to present on videotape a pointed analysis of how schools can fail some children, notably those like himself. His statement should be required listening for those people who wonder what makes some high school boys act the way they do. The answers are there, but they will probably not be heard by the right people, for as this boy said, "Nobody ever listens to us."

Because our classroom was small, I had no trouble surrounding these non-word people with words. The effect was dramatized, of course, but as someone once described Walt Whitman's technique, "Sometimes a person has to shout if he wants to be heard above a whisper." So though none of my students ever got to all of the print around them, it was always there and they couldn't miss the feeling that there was a lot for them to find out when they got ready to do so.

They could choose from the newspapers on their desks; they could select from the magazines strung on wires running around the walls of the room; they could pull out books from racks and bookcases; they could even take them off piles on the floor. We had so much to read around us that the students had literally to stop, look, and move printed matter if they wanted to sit down. And always they were surrounded by the odor of print, for ink and paper were everywhere. For many of them, this experience was unique. Whether they came from a home where English was a foreign language or one where a $1500 TV set plus *Look* and *Better Homes* were all of the media, my saturation effect was bound to be something different. Some of the students were staggered; none were indifferent.

To show them what the reading process was, I approached them through something they could see and work with, something they could touch. They were bright and alert in their own way, capable when their capabilities were tapped. The girls were adept at making clothes; the boys could scrounge parts from old cars and put something together that would get them to the Friday night dance. Because these students responded to how things work, I showed them how reading works.

I pointed to the Weather Report in the newspaper. Someone read it. I printed on the board:

WEATHER

I said it again because repetition is important. Then I printed underneath the word:

XFBUIFS

and asked, "What does this say?"

Their answers just bordered on tolerance:

"That's not a word."

"It doesn't look right."

"Are you trying to be funny?"

I told them there was a relationship between the two words and then I asked, "Can't anyone figure out what it is?"

When they couldn't I gave each one a slip of paper on which were typed in sequence the letters of the alphabet. With this in front of them, they soon spoted the fact that *X* is the first letter after *W*, *F* the first one after *E*, *B* The first after *A*, and so on. Then I asked, "Who can explain the system I used for writing the second word?"

All of them could do this; they said it was easy and it made sense once you knew how to do it. Continuing to copy the weather report so that they could practice using the system they had just figured out, I wrote the following and asked who could decipher it first:

SBJO UPOJHIU

The game was on. We went rapidly from "Rain Tonight" to

DPPMFS BOE DMPVEZ UPNPSSPX.

As they worked out the message, I said, "This is a very simple substitution cipher. Would you like to make up others that are not so easy and then select a partner to whom you will explain your system so that he can 'read' a message you send him written in it?"

It sounded like fun, and it was fun. As they worked out "hard" ciphers, they talked about the secret messages they had sent friends when they were in grade school. They talked about military and commercial uses of codes and ciphers. We defined and discussed such terms as cipher, encipher, decipher, code, encode, decode. We stayed with this exercise for about a week, taking first sentences and then paragraphs out of the newspaper for materials to encipher. These "dumb" students quit only when their systems got so complicated that a class period was not long enough for working them out.

There were two reasons why I did not give them homework. During the time when they were so hostile toward school, they would never be caught taking any of it home with them. If I had asked them to do homework, that would have lined me up with what they were against. I wouldn't have been able to work with them if they had felt that way. Also, I knew that most of them had regular jobs, for they were in the cooperative work program our school operates in conjunction with firms in our area. So they just didn't have time for a lot of homework. I did not want them to feel obliged to do something for my class, and then feel guilty–and thus hostile again, when it was beginning to lessen–for not getting it done.

So when the ciphers became too long to finish in class, we went on to something else. But as we left that phase of reading, the students had the message. They had an insight into what the reading process consists of. They understood that their performance in it depended on how well they learned the systems for deciphering and decoding the words. Armed with this knowledge, their resistance was lowered toward some of the drills on blends, digraphs, prefixes, suffixes, and roots on which they worked too. Eventually they became more proficient in attacking the unfamiliar words they encountered in the newspaper and in their content subjects.

The newspaper was a great help in vocabulary building because it supplied the words we worked with, and it presented them through a popular medium in an interesting context. As a student read silently, he underlined words he did not know. When he finished reading, he listed some of them in a spiral notebook. He did not list all of them because a large number would have been too discouraging a prospect for him to face. So he listed only a few, and I wrote them on the board. He checked them in the dictionary for syllabication and definition. He selected the meaning as it was used in the newspaper item. If the word had more than one meaning, we talked about this and gave examples. The student practiced pronouncing the word and spelling it. We tried, through many forms of repetition, to make it a part of his working vocabulary.

Along with expanding vocabulary, we worked at improving comprehension. On some days the students took turns summarizing orally news items they had read. Other days they would write summaries. Most of them had trouble initially with organizing and re-telling in their own words what the item was about. But after they discovered how the opening sentence (s) gave the *who, what, when, where, why,* and *how* of a piece–and that they did need to concentrate on remembering these essential items even to the point of writing them down as they came to them–when they had the answers to these six things, they could reconstruct the outline of the story. Then having the outline, they could recall some of the details, and by filling them in have a reasonably accurate account of what they had read.

Once they caught on to this system, they were able to find the plan in what they read. Then summarizing and remembering became easier, not only for newspaper reading but also for everything else they read. Another slant on this was SQRRR. This was especially helpful to them when they applied it to reading their content subjects. By applying the SQRRR to a news item, they could come up with something like this:

Survey (Headline and Photograph): "A Mideast Warning by Nixon"[1]
Question (Sub-head): What is meant by "He Also Softens Nuclear Stand"?

Read, Recite, Review (Who, What, When, Where, Why, How):
Who: President Nixon
What: His first press conference
When: Yesterday
Where: Washington, D.C.
Why: People want to know how he stands on the mid-East crisis and the arms build-up
How: Comments by Congressional leaders on what he said

By combining these techniques, the students learned to use simple analytical tools which helped them to read to remember, regardless of the kind of content.

When a student said he could summarize orally but not in writing, he would dictate to me and I would write down what he said. Then he would read it back, thus being able to see that he could express himself in writing. Convinced that he could succeed, he became more willing to try to write without going through the medium of dictation. When he gave his oral summary, he found himself using some of the words that he had read in the newspaper. To write, he could see that all he had to do was put these same spoken words down on paper. This showed him how his system for reading fed into his system for speaking; and that it in turn fed into his system for writing. By following this process through again and again, his total language experience of using all of these systems began to take the shape of being a very useful tool for communication. It began to mean something important to him. He could see how improving one part of it would improve its other parts. This insight, added to the appeal of the material he read, gave him the momentum he needed for moving out of the ruts of frustration and hostility in which he had been stuck for most of his years in school.

Near the end of the term we tried to bring these experiences together for each student. Each one chose a topic of particular interest to himself, and he set about to compile a book about it. His materials were to come from newspaper clippings relevant to his topic and from written and oral reports he would do himself.

Don's project illustrates the language experiences involved in an exercise of this kind. His achievement also illustrates the progress possible through free reading when a student is allowed to follow his own interests. Seventeen years old and entering high school for the third autumn, he was still classified only as a freshman, for in all that time he had earned only three credits. Asked why this was so, he said, "I didn't like school, so I cut a lot."

He chose prisons for his topic. His interest in them had been stimulated by a field trip our classes had taken earlier in the year to Cook County Jail in Chicago (and perhaps this was an unconscious reaction to what school had always been to him).

When Don first selected this topic, he said he would collect items about crime, criminals, and prisons. But after a few days of going through newspapers looking for these accounts, he saw that his topic was too broad. He found too much, so looking at his stack of clippings, he narrowed his idea down to items about Cook County Jail. Fortunately (or unfortunately?) for him, a jail break occurred during his period of reading, so he was almost overwhelmed again with materials for even his limited subject.

To learn more about the purpose for his book and its probable effect on his readers (the other students in my Title III classes), Don checked forewords, prefaces, introductions, and tables of contents as well as other elements of a book as he found them in the paperbacks in our classroom. He discovered that his book would be more interesting to his readers if they knew why he had chosen the topic, how the items he had selected represented his point of view, and what he hoped his readers would learn from using his book.

He wrote several drafts of a foreword before he was satisfied with the version which became final copy. He then analyzed the contents of his clippings so that he could write brief but informative titles for his Table of Contents. he mounted the clippings on unruled sheets of loose-leaf notebook paper ane enclosed them a folder appropriately titled and illustrated. He chose one news story and wrote out several questions based on its contents. The questions would be given to another student for answering after he had read the account. Some of Don's questions were to have factual answers; some were to be interpretive. Don was interested in the relative values of the different types of questions, and he commented on the methods of questioning used by teachers in some of his other classes. Obviously, newspaper reading was opening up critical thinking for him. He began acquiring an insight into how to weigh one idea against another.

From this he went on to a consideration of ideas relating to jail. He wanted to view them as theme topics, one of which he would develop and write. Some of his topics were these:

1. What kind of person should a warden be?
2. A chaplain's day at Cook County Jail
3. A prisoner's defense for slugging and robbing a bus driver

4. How does a main in prison feel?
5. Thoughts on solitary confinement
6. A prosecuting attorney's plea for the death penalty for a murderer
7. Capital punishment, pro and con
8. What are some things, besides violent crime, for which a person can be put in jail?
9. What reforms are needed in prisons today?
10. An experiment in rehabilitation in a California prison

Don chose the last topic for the theme he would write because it represented the culmination of his interest in his topic. He had worked up to this through discussions in class which began with "How does a person get into jail?" and ended with "What does he do after he gets out?" Along the way he had asked such questions as "Will people trust him? Can he get a job? Is anything done to help him before he gets out so that he won't commit another crime and get back into jail again? What is the word for helping a man while he is still in prison?

I gave him the word–rehabilitation–and then he wanted to know how he could find out something about it, for the newspaper did not have anything on this. Here, of course, came one of the high points of our work with the newspaper, for this was the place from which we took off, the point from which we would go further into other kinds of reading.

We went to the library, to the *Reader's Guide to Periodical Literature.* Don had not used this reference work before, so he was excited about discovering something so helpful for locating information. He read down the column of titles of articles on rehabilitation of criminals and selected one about an experiment in a California institution. Almost unbelievingly, he followed through with me the process for obtaining the four-year-old magazine from the stacks, checked it out, and then turned to see if the article really was on the page the *Guide* said it would be on! He took the magazine back to the classroom, read it, and made notes on facts he needed for his theme.

After writing the theme, he wanted to read and review a book related to his topic. I suggested Bill Sands' *My Shadow Ran Fast,* and when Don had finished it, he said, "That was the best book I ever read." Two years earlier, in his freshman English class he had been exposed to Dickens' *Great Expectations.* When I referred to this in connection with his interest in prisons, he said he thought *Great Expectations* was dry and unbelievable, especially that part about Miss Havisham. We discussed some of the similarities between Dickens' symbolic, fictionized account of prison and Sands' slightly symbolic, non-fiction account. Don then had a clearer understanding of what Dickens, as well as Sands, was trying to say about the effect of being in prison, and of how many kinds of prisons there are. He saw how two authors working with the same idea would handle it in different ways. He saw that the level on which Dickens wrote was more abstract, which explained why that book was more difficult to read than Sands' book. The reference to abstraction brought us to a discussion of levels of language meaning, and I showed him Hayakawa's Abstraction Ladder. These discussions went on, of course, in the presence of other members of the class, so they benefited from Don's work just as he benefited from theirs.

For a slightly different slant on prison but one still related to his topic, he wanted to read *The Loneliness of the Long Distance Runner,* for I had mentioned it as a possibility to him earlier. But he did not have time for this second book then because he was near the end of the school year, and he had some history reports to get in. Just feeling responsible for getting a credit in history, though, was a big achievement for him. Here again was one of the anticipated by-products of individualized reading instruction for students in the Title III project.

One of the other boys in the class had read Sillitoe's book, after seeing it as a movie on TV (said viewing stimulated by our remarks earlier), so he gave Don a thorough review of it. This is another example of how the students had developed to the point of being willing to help each other, which was in marked contrast to the way they had been at the beginning of the year.

When Don's book on Cook County Jail was finished, he had something which showed how he could develop through his words and those of other people an idea of special interest to himself. What he had done had led him through all kinds of oral and written experiences; it had made connections for him which had been missing; it had taken him into areas of reading he had not entered before. He had brought all of these things together because of his own interest in them and because of his planning how to organize and expand it. This project proved to him that he could do things on his own at school. It made him feel that he could repeat the process not only in a Title III class but also in other classes such as history, English, and science. As the year ended and after his history reports were in, he embarked of his own volition, on another reading project, stirred into existence by newspaper stories.

At the time of General Eisenhower's death, Gettysburg was frequently in the news. Don had visited the battlefield there while on a summer vacation with his parents, so the reference to that place turned his thoughts toward the Civil War. The last day I saw him, after finals were over in June, he was reading *Across Five Aprils* and looking forward to tackling Sandburg's *Abraham Lincoln.*

This seemed to me the most fitting evaluation we could have of a student in our innovative reading program. He showed dramatic improvement on all of the post-tests we gave him, too, but the evaluation that will really count is the one we will not be in on: what will he do with reading when we are gone and the project is concluded?

Books similar to Don's were compiled by my other students. Each was different, and all of them were interesting. They illustrated vividly the importance of diversity and individualization of reading materials for students having learning difficulties in school. In most instances, these difficulties can be traced to poor performance in reading; and until the reading improves, the other school work will not improve. Like any skill, reading will not improve except with practice; and practice won't come from these older students until they initiate it. They are willing to do this when they like what they are doing, and when it seems to be accomplishing something for them.

So when we get these students, we need to prime them into action again just as we would pour water into a hand pump, dry and unresponsive from disuse, if we would get the stream flowing. I found the newspaper the means for getting these students moving again in reading, and I recommend it without reservation to the teacher who has people who say they won't read. They will, if you give them a newspaper, because they just can't resist it. It's that good!

FOOTNOTES

[1] Hayakawa, S. I. *Language in Thought and Action,* 2nd ed. New York: Harcourt, Brace & World, 1964, p. 179.

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IMPACT OF READING ON THE PERSONAL DEVELOPMENT OF YOUNG PEOPLE

David H. Russell

The International Reading Association is concerned the with improvement of reading instruction. The teacher of English in secondary schools, in contrast, often works primarily with English and American literature organized historically or in thematic units. Somehow or other a bridge must be built between these two goals and activities. One means of fraternization or unification is our concern today with the impact of reading on young people. It is not enough for the elementary teacher to develop efficient word-attack skills or the English teacher to concentrate on the interpretation of figurative language. The teacher of reading is concerned with interpretation and the teacher of English develops specific reading skills. The area of common concern lies in the region of the interpretation of the impact of reading. It is at these levels that an alliance between the reading approach and the literature approach can be effected.

Five Levels of Reading

This reciprocity can be achieved for the maximum development of young people if we review the fact that we read at five levels:

(1) At the first level we are largely concerned with the sounds of words and letters. In some school situations children are encouraged in word calling or "barking at words" without much meaning attached.

(2) At the second level we read casually for a general impression as the pupil sees what the book is about or the businessman dozes over his evening newspaper. Such scanning may be useful as a preliminary device or it may leave no trace.

(3) At the third level we read for literal comprehension. We get the facts or we follow explicit directions. The children fill in

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the workbook blanks and the high school students answer the questions on the plot of the novel. This type of literal comprehension is most used in schools and most studied in research. Such reading may have many positive values for the child finding some facts on Africa or the suburbanite engaged in a weekend "do-it-yourself" project.

(4) At the fourth level we interpret what we read. We go beyond the literal comprehension of the fact or the main idea to read between the lines. We draw some conclusion of our own from the passage—we envisage or predict or infer. Sometimes we reflect on the author's argument—we evaluate or analyze critically. Such reading we can roughly label creative and critical reading. We ordinarily don't do much of this in school but, as we shall see, perhaps we can do more. This and the following level are more complex and subtle.

(5) Occasionally we read at a fifth level—or depth. We go beyond thoughtful analysis, interpretation of literary devices or critical review. At the fifth level reading becomes a stirring personal experience. We recognize a new, important idea in the actions, characters or values described. We feel what Wilson called "the shock of recognition." The impact of the material is such that we see ourselves or others more clearly. In our reading we are changed, a little, as persons.

Most reading, in school and home, is done at the third, associative level and most of the writing and research in the field of reading have been done at the first and third levels. We know a lot about word perception, the teaching of phonics, and ways of developing comprehension of the printed page. Activities at these two levels make many contributions to the individual. There are worthwhile effects of this sort of reading for all people. The young child enjoys his new-found skill of working out new words and the world's work and its week and hobbies involve the use of much factual material to contribute to knowledge and skill. Reading has always been one of our most important resources for gaining knowledge. Granted a modicum of reading skill in the individual, books and libraries are storehouses of information for him. Thus, reading at the third level may have influences on personal development. It may give the twelve-year old increasing skill in making model airplanes or it may help the adolescent acquire some facts about the French Revolution or about adult life.

At the fourth level, we are not so sure of our ground as we are concerning word recognition or literal comprehension. A feature of recent research, however; has been considerable work on critical and creative reading abilities. For example, Sochor[1] has edited for the National Council on Research in English a research bulletin entitled *Critical Reading.* In a recent study at the University of California, for a second example, Clark[2] developed twenty-three lessons in reading to predict beyond the given facts and tested some ways of teaching these in the classroom. Both Sochor and Clark found that tests of critical reading and of reading to predict were relatively independent of the usual measures of vocabulary and comprehension. In going from literal comprehension to personal interpretation as in prediction, a reader puts more of himself into his reading. He thinks beyond the line of print. In critical and creative reading the perceptual process is the stimulus to many kinds of thinking–to drawing analogies, to checking a writer's point of view, or to beginning an attack on a personal problem. as suggested below, more work needs doing in exploring this process of thoughtful reaction to an author's ideas.

It is on the fifth level, however, that our knowledge is slightest and our needs are greatest, and so it is with the effects of reading on individuals that this paper is chiefly concerned. Can literature affect the lives of children, adolescents or adults? In the words of Ciardi, can it make him "quietly passionate" about an idea or a cause? Can literature contribute to the self-concept? Can a story about courage fill a boy with courage or help him find himself? Or is this too much to ask, even of great literature? Reading may be useful at all five levels, but somehow, this fifth level of impact seems the most tantalizing and important of all.

Previous Assumptions

In the past, the teaching of English in the secondary school has been guided by two assumptions, depending in part on the maturity of the students and the personality of the teacher. The first assumption is the scholarly one–that adolescents should study literature as literature. This means not only that youth should know some of the great writers and literary works of our heritage but that they should be able to state why they are great. The approach has embraced, accordingly, an introduction to such fields as literary history and criticism. At its worst this teaching has been a rehashing of the instructor's college notes. At its best, it has opened new worlds to adolescents with superior verbal abilities and language interests. The second assumption, however, is our primary concern today. It is the belief that the study of good literature can influence character and behavior. It goes beyond the enjoyment of stories and poems, typical of good elementary school teaching, to the hypothesis that literature influences lives. We teach literature to add meaning to friendship, loyalty, courage, honesty, justice, faith, truth, and the other lovely words of our language.

In assuming that literature inculcates the virtues, the moral certitudes of our culture, we have followed the beliefs of the ancient Greeks and other philosophers down through the ages. On many occasions, too, good men have testified to the power of literature in their lives as when Luther Burbank declared that his whole life was changed by reading one book, *The Origin of the Species*. But such testimony, especially from literary people, does not constitute evidence in the scientific sense. What happened to Housman or de la Mare or Vachel Lindsay may not necessarily happen to the typical junior in George Washington High. We may hope that the study of literature will influence youth, but we cannot depend upon the personal affirmation of a few exceptional people. Instead, it is our duty to look at other evidence based on research, incomplete as it is. What, then, are some solid facts about the impact or effects of reading?

Some Possible Effects of Reading

The effects of reading depend upon the kind of reading we do—upon which of the five levels we are operating. At the first two levels of word recognition and casual impression the impact on the reader's personality or life cannot be great. In elementary school or secondary school the child who is barely deciphering material much too difficult for a person of his reading ability has little opportunity to interpret at the fourth level or, at the fifth level, to find materials useful in solving his own problems. Piekarz,[3] for example, has shown that children unable to read a passage with relative ease have fewer reactions to it, with many more responses at the literal-meaning level than at the implied-meaning or evaluation levels. Accordingly, the effort we give to the making of skilful, fluent readers is worthwhile in both the elementary and the secondary school. Youth need word-attack skills and ability to follow directions, not because they are going to read only words or follow directions blindly, but so they can go into the meanings behind the words and, if necessary, to questions about the validity of the directions. Grasp of literal meaning ordinarily comes first. No student can interpret sensory appeal or symbolism if he cannot understand the literal meaning of the passage. This is one argument for occasional use of the "read-to" situation, whether in third grade or tenth grade, but it is also an argument for a sound body of literal comprehension skills as a basis for interpretation and for impact.

But teachers of elementary and of secondary classes can help young people derive both literal meanings and implied meanings. I believe the problem is not "either-or" and that teachers of fourth grade and teachers of secondary English must operate in both orbits. However, it is in the realm of imaginative literature that we usually get to the fourth and fifth levels of reading. It is here that good writing is intrepid in its approach to problems, ingenious in its solution of difficulties, in a way that the child or adolescent cannot achieve by himself. Getting the words right is not enough. It is at these fourth and fifth levels that reading can make its greatest contribution to individual development.

Fortunately, we have some research evidence beginning to be accumulated about reading at the fourth level of interpretation of printed materials. The effects, of course, will depend upon how the reader interprets.

a. Most children do not seem to respond to some of the commoner literary devices such as metaphor or personification before they are in their teens.

b. Children's interpretations are influenced by their attitudes and expectancies toward what they are reading, by their previous "set" in the reading situation.

c. When asked to respond to short stories, adolescents give interpretational reactions as a dominant type of response; other categories of response, in order, are narrational, associational, self-involvement, literary judgments.

d. Responses to a piece of literature are largely an individual matter. Children and adolescents with different experiences, personalities, and needs see different things in the same character, story, or poem—and one interpretation may be just as "true" or "honest" as the other. Consequently, teachers of reading and literature should beware of looking for the one "correct" interpretation.

e. With adolescents, literary judgments and emotional involvments vary inversely. In other words, children and adolescents tend to suspend objectivity when emotionally involved. Conversely, if we emphasize objective judgment, we may cut down emotional response.

f. The most common emotional involvements of adolescents in fiction seem to be "happiness binding" (the desire for a happy ending) and insistence upon certainty in interpretation.

Perhaps these half-dozen samples of findings are enough to show that we are beginning to accumulate some research evidence about some of the psychological factors involved in interpretation, whether it is a good story in a third reader, a chapter or poem in a high school anthology, or an individual example of an author's work.

The Impact of Reading

Unfortunately, evidence about reading having an impact on lives is largely confined to anecdote and to case studies. Some of you remember a book, story or poem that greatly affected you. MacLeish has said that "A poem must not mean, but be." Proust has written, "Every reader reads himself. The writer's work is merely a kind of optical instrument that makes it possible for the reader to discern what, without this book, he could perhaps have never seen in himself." But we and our students are not MacLeishes or Prousts and we have trouble translating such insights into classroom practices. Elsewhere I have summarized the research on the impact of reading[4] and shown that effects depend upon the characteristics of the individual doing the reading, the content of the materials read, and the total situation in which the reading is done. Studies by Smith, Weingarten, and others have shown possible influences on values and behavior. The process of bibliotherapy as used with individuals with personality difficulties may have some lessons for us here in work with more normal adolescents. Rather than trying to quote you the ten or fifteen researches that give some evidence of the effects of reading, I should like to proceed with a few examples of what can be done in ordinary classroom situations.

Some Practical Suggestions

A few lucky young people make private discoveries of the world of literature, but most children need to be helped in their explorations by the understanding parent and teacher. For generations parents and teachers have made an honest effort to go beyond the surface facts or literal ideas of a selection to some of the important, underlying ideas because they would have children or youth greatly influenced by literature. Teachers especially can be aware of the many different potentialities of the reading process corresponding, in part, to the five levels described above. Reading *may* bring at least eight kinds of results:

Skill and Understanding	Acquisition of new skills
	Increase of worthwhile information
	Knowledge of how to find out more
Interpretation	Development of interests and appreciation
	Improvement of problem-solving and critical thinking
Impact	Evolution of social and personal insights
	Understanding of fundamental values
	Changes in behavior and personality

The list is hypothetical and formidable, but teachers should not stop short at the end of the first three possibilities described as literal understanding. Let me illustrate something of the last two areas because they are the most difficult. The materials I use are deliberately taken from popular basal readers and anthologies. You don't have to go to a highly selected individual piece of literature to get literary or human values. In fact, above second readers at least, most selections are put in reading materials for class use just because they have some underlying ideas and may illustrate important values

Take for example the little poem, "Bird Talk" found in a basal third reader. Now you could teach this poem at the level, here are birds chattering together and this is what they say. Or by question and discussion you can lead the group to see that our perceptions depend upon our point of view. Birds see things in bird-ways and each of us see things in our own individual way. You might stop with this important bit of psychology. Finally, some children might be led to the climactic idea expressed elsewhere by Robert Burns

O wad some power the giftie gie us
To see oursels as others see us!

Because this is a third-grade poem, of course the children should do something about it besides discussing it. Perhaps they will write other poems, as one class did, from the point of view of other animals. "Think–said the rabbit,"! or "Think, said the horse," etc. Or perhaps they might write, as another group did, "How I see myself and how some other person (mother, friend) sees me." These last were personal documents to be read only by the teacher.

Or at the secondary school level take the Edwin Arlington Robinson poem "Richard Cory" found in some anthologies. The poem starts:

Whenever Richard Cory went downtown,
We people on the pavement looked at him;
He was a gentleman from sole to crown,
Clean favored and imperially slim.

One way to use this poem is to postpone discussion. Instead, let the students hear the poem a couple of times and then write what they think is its theme. The reactions of one group of students to this ambiguous poem varied considerably. In response to the question about its main idea one student said, "The personal problems of Richard Cory," another, "Money is not everything";

another, "contrast between rich and poor"; and still another, "All that looks perfect may not be so; deceptiveness of appearances." Here were young people reaching for the truth, each in his own way, and who is to say which answer is "correct." Perhaps, all of them deserve further discussion, writing, and searches for related literary materials.

This poem may be a bit of a shocker to the junior high school student who is "happiness bound," who has been accustomed to stories with the Hollywood ending of "all's well." Perhaps this is enough–all does not end well in this world. How would you do it? Perhaps the group can be encouraged to dig a little deeper, can be helped to understand the behavior, first of the townspeople, and then of Richard Cory himself. Here is a piece of literature whose ambiguity can stimulate discussion and writing. Thus the group moves away from the black-and-white of the Westerns and much cheap fiction to a study of some of the mixed motives and human conflicts found in all of us. Then they are on the way to some of the self insight and social insights which literature can give.

We have evidence that teen-agers want to grapple with some of these problems. For example, one English teacher in a California high school collected the opinions of an "average" ninth grade about the books labelled "teen-age books" in their school library. Here are some of the comments (these are all quotations):

1. I'd like more realism, not so much fairy stuff, with phony living happily ever after.
2. Books which present the ordinary teenager and his problems, so we can see how some are solved.
3. Teen-agers cuss and know cuss words, but the books I read sound as if they were written for ten-year-olds.
4. I'd like a book which would show how hard it is for a high school girl to get to know the boy she likes. Parents always tell you that you should go with someone else.
5. A book which shows us what life is like when you grow up.
6. Most teen-age books are too childish and not real enough. Most of them sound like a little 8- or 9-year old wrote them.

7. Authors must think that teen-agers are awfully innocent.
8. Life isn't like what you find in books. Life is hard and people are cruel and don't think of others. It's dog eat dog, and an eye for an eye, and a tooth for a tooth. (From a boy in an underprivileged family.)

Here, then, are interpretations by young adolescents not of one poem or story, but of the books labelled as written for teen-agers and usually found in high school libraries. You have noted that a few students found these books satisfying and realistic, that others regarded them as pap and fantasy. In the reactions there are, perhaps, some implications for the content of what we ask young adolescents to read. Their books should deal somehow with situations which seem important to them; the books' problems should be their problems.

I have used poems for my practical examples because they are short. You have other poems, and other stories and plays which mean a lot to you at the fourth and fifth levels of reading and which, accordingly, can be shared with young people. These may be a simple story in a primer about a family, a tale of heroism, or a well-known piece of literature. Whatever it is, teach it in depth. Give it time for thought.

To summarize what I am saying, perhaps I have been suggesting that secondary teachers can learn from elementary teachers, and elementary teachers can learn from secondary people. In the past, the elementary school has been strong on teaching reading skills; in secondary schools, some of our best teaching has been in literature. Accordingly, secondary teachers can learn from elementary people ways of teaching reading skills–not just word recognition or comprehension, but how to read a newspaper, how to handle a science chapter, how to study a short story, how to attack a play or a novel. Conversely, an elementary teacher can adopt more of the techniques of a good secondary teacher of literature. The teacher of the third or the sixth grade can assume that some reading is to be done in depth–children can be aided in the interpretation of character and in discovering social and spiritual values. Thus in years ahead, successful procedures in each part of the school system can be applied at the other level.

For three hundred years now, since the days of the *New England Primer,* some people have believed that reading can contribute to the virtuous life. Probably they are right, but we all have to work on it.

FOOTNOTES

[1] E. Elona Sochor, editor, *Critical Reading: An Introduction.* Bulletin of the National Conference on Research in English. National Countil of Teachers of English, 1959.

[2] Charles M. Clark. *Teaching Sixth-Grade Students to Make Predictions from Reading Materials.* Doctoral dissertation, University of California, Berkeley, 1958.

[3] Josephine A. Piekarz, *"Getting Meaning from Reading," Elementary School Journal,* 56:303-309, March, 1956.

[4] David H. Russell, *"Some Research on the Impact of Reading," English Journal,* 47:398-413, October, 1958.

PART V

MEASUREMENT OF READING PERFORMANCE

WHAT CAN BE MEASURED?

Roger T. Lennon

We can look back today upon virtually a half-century of experience in the development of objective, standardized tests of a wide variety of reading skills and abilities. Such tests, numbering well into the hundreds, have been making their appearance year after year since about 1910; some have enjoyed decades of apparently satisfactory use, others have lapsed into disuse after relatively brief careers. The period since 1910 has witnessed prodigious research activity in the reading field; for the past several decades, an average of a hundred or more publications per year have swelled the literature devoted to this endlessly fascinating topic. Much of this research literature has been concerned with analysis of reading skills, speculation and experimentation concerning the nature and organization of reading abilities, and development and utilization of appropriate instruments. To undertake even the most cursory review of the reading tests that have appeared, or of the implications of the voluminous research with respect to reading measures, is far too ambitious a task, and yet an answer to the proposed question requires at least passing cognizance of some of the history and research.

THE PROBLEM

What can be measured? An unsuspecting student who sought to answer this question from an examination of test catalogs, or of the instruments which they describe, might say, "We can measure paragraph comprehension, word meaning, word discrimination, word recognition, word analysis skills, ability to draw inferences from what is read, retention of details, ability to locate specific information, rate of reading, speed of comprehension, visual perception of words and letters, ability to determine the intent of

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a writer, ability to grasp the general idea, ability to deduce the meaning of words from context, ability to read with understanding in the natural sciences, in the social sciences, in the humanities, ability to perceive relationships in written material, ability to sense an author's mood, or intent, ability to appreciate poetry, ability to grasp the organization of ideas, ability to read maps, charts, and tables"–The list may be extended, if not *ad infinitum,* at least *ad* some seventy or eighty alleged reading skills and abilities. And this, mind you, from an inspection only of tests that are labeled as reading tests, without any consideration of other tests which look very much indeed like blood brothers to the reading tests, but which mask their familial ties under such beguiling aliases as tests of "critical thinking," of "educational developments," or even–most artful deceivers of all–as tests of "mental ability," "intelligence," or "scholastic aptitude."

Surely, no reader is so naive as to suppose that there really corresponds a separate, identifiable skill or ability to each of the test names. What then may we assume we are actually measuring with the scores and scores of differently named tests?

It is one thing–and a necessary thing–to make a careful analysis of reading ability, to spell out its various supposed components in detail, and to prepare extensive lists or charts of the specific skills or abilities to serve as statements of desired goals or outcomes of the reading program. It is quite another thing to demonstrate that these manifold skills or abilities do, in fact, exist as differentiable characteristics of students; and still a third thing to build tests which are in truth measures of one or another of these skills, and not of some more general, pervasive reading ability.

But if the number of abilities or dimensions of reading is not the seventy or eighty indicated, what is it? And how can we tell? Can we reduce this vast complexity to a single, global measure of reading ability, as some have concluded–or three, or five, or ten? Twenty years ago Dr. Arthur Traxler[1] addressing a conference on problems in measurement of reading, adverted to this same issue, and remarked that "What is apparently needed is a mathematical resolution of the difficulty by means of a thorough-going factor analysis of the abilities which enter into silent reading." Even as

Dr. Traxler made his plea, such empirical attacks on the problem were under way, and during the decade or so following, there appeared a series of excellent studies of this kind that shed much light on our topic.

REVIEW OF RESEARCH

Traxler himself in 1941[2] reported an analysis of the Van Wagenen–Dvorak Diagnostic Examination of Silent Reading Abilities, one of the most impressive tests of this kind that had appeared up to that time. He sought to ascertain whether the several parts of the test yielded "measures which are independent enough to warrant their separate measurement and use as a basis for diagnostic and remedial work." Studying the results on these tests for a group of 116 tenth-grade students, Traxler concluded that the "measures of Central Thought, Clearly Stated Details, Interpretation, Intergration of Dispersed Ideas, and Ability to Draw Inferences appear to be measuring closely related reading abilities. There is at least reasonable doubt concerning whether or not the separate scores contribute anything greatly different from the reading level score." He found most of the parts so highly correlated that diagnosis based on the scores had little real meaning. In fact, when the intercorrelations were corrected for attenuation, most approached unity.

Even before Traxler's call for research, Gans in a 1940 study [3] had analyzed the relation between a specially built measure of the "critical types of reading required in the selection-rejection of content for use in solving a problem," and a reading composite based upon two standardized reading tests, Thorndike-McCall and Gates Silent Reading, and four sections of the California Test of Mental Maturity. (Worthy of note is the fact that Gans justified the composite as a general measure of reading comprehension on the basis that the intercorrelations among the components approached their respective reliabilities–even though the components were as superficially varied as the Thorndike-McCall score, Gates' scores on Appreciating General Significance, Predicting Outcome, and Noting Details, and California Delayed Recall, Numerical Quantity, Inference, and Vocabulary.) Analysis of the results of a group of 417 intermediate-grade pupils led Gans to conclude that "the abilities (i.e., the reference-reading abilities) are not closely enough related to those in the reading criterion to be measured by tests designed for discovering the criterion abilities," and "the composite which functions in reference reading is made up of a number of variables, with reading ability, as measured by the reading criterion one factor, and the selection-rejection pattern another." ". . . another factor operates which possibly includes some function of delayed recall."

A trail-blazing study, and probably still the best known of all the investigations of this type, was that reported by Davis, originally in 1941.[4] Davis sought to identify some of the fundamental factors in reading comprehension and to provide a means of measuring them. On the basis of a comprehensive survey of the literature, he listed nine supposed categories of basic skills of reading comprehension. He proceeded to develop tests questions to measure each of these skills, administered the tests to a group of subjects, and computed the intercorrelations among the nine tests. He interpreted a factor analysis of the results as indicating the presence of nine factors, six of them clearly significant. These latter included word knowledge; ability to manipulate ideas and concepts in relation to one another—"reasoning in reading"; ability to grasp the author's expressed ideas; ability to identify the writer's intent or purpose; ability to follow the organization of a passage; and knowledge of literary devices and techniques. Of Davis' nine factors, word knowledge accounted for by far the greatest part of the variance, followed by the so-called "reasoning in reading" and the literal meaning factors.

Davis concluded that at least two factors, the word knowledge and the reasoning factor, were measured in his tests with sufficient reliability for practical use, and that adequately reliable measures of three other factors—literal meanings, inference, and ability to follow the organization of a selection—could be developed as a practical matter.

A re-analysis of Davis's data by Thurstone,[5] employing a somewhat different factor analysis technique, led Thurstone to conclude that a single factor was sufficient to account for the obtained correlations. The apparent conflict in interpretation reflects different purposes served by the respective types of factor analysis employed in the two investigations. Davis, reacting to Thurstone's re-analysis of his data, continued to maintain that his first six factors, at least, represented significant dimensions of reading comprehension, though admittedly, several of them accounted for very little variance in reading scores.[6]

Langsam in 1941[7] reported a factor analysis of results of six reading tests, yielding fourteen scores, and one intelligence test yielding seven scores. She identified five factors, labeled respectively a *verbal* factor, concerned with word meaning, *a perceptual* factor, a *word* factor denoting fluency in dealing with words, a *seeing relationships* factor, perhaps concerned with logical organization, and a *numerical* factor. The factors were found to overlap to a considerable degree, beclouding their interpretation.

Conant in 1942[8] undertook to answer the questions: "Is there a general reading comprehension, or does reading proficiency depend upon skills using a number of different reading techniques? If there are different reading abilities, how are they interrelated? She developed an outline of a test to measure the following skills: (1) Reading to get in detail the pattern of the author's thought, including comprehension of the main points, comprehension of specific facts which support main points, comprehension of cause-and-effect relations, and comprehension of words in context. (2) Ability to interpret and make a critical evaluation of material read, including selection and organization of facts relevant to a more general idea, and ability to draw inferences.

Conant developed tests designed to measure these skills and administered them, together with the Nelson-Denny Reading Test and American Council Psychological Examination. Intercorrelations among all the measures except five were above .50, leading Conant to state that there was no evidence "that students in general employed relatively independent abilities in this study–type reading." She concluded that the results were largely accountable for in terms of a single factor, tentatively defined as general comprehension. Three other factors appeared, but accounted for extremely small parts of the variance. Conant pointed out that her results by no means precluded the possibility that some individuals may show marked differences in their relative abilities to use different reading techniques.

A doctoral dissertation by Artley in 1942[9] explored the relationship between general comprehension ability, as measured by the Cooperative C-1 Level of Comprehension test, and hypothesized special reading abilities in the social studies area, measured by the Cooperative Tests of Social Studies Ability, Proficiency in the Field of Social Studies, and Survey Tests in the Social Studies, including ability to obtain facts, to organize, to interpret, to generalize, to perceive logical relations and to evaluate arguments. For a group of two hundred eleventh-grade students, Artley found the correlation between general comprehension measure and the composite of the specific measures to be .79 (.86 corrected for attenuation). He found also that the correlations of the several specific measures with total reading comprehension all fell within a fairly narrow range, from .6 to .8, and he concluded that one could not "dismiss the possibility that there are a great number of pupils who might profit from a specific type of instruction." Artley interpreted his findings as "evidence that there exists a significant degree of specificity in the measures relating to reading comprehension of the social studies."

Hall and Robinson reported in 1945[10] an attempt to develop independent measures of various aspects of reading. After analyzing the research and the available tests produced up until the time of their study, and concluding that these tests left very much to be desired from the standpoint of diagnostic potentiality, they developed a battery that included twenty-five measures, many of which were tests of reading of non-prose material. Factor analysis of the results of administration of this battery of tests to one hundred college students yielded six factors, which Hall and Robinson defined as "attitude of comprehension accuracy"; an "inductive" factor; a verbal or word-meaning factor; a "rate for unrelated facts" factor; a chart-reading factor; and a sixth undefined factor. In other words, six factors, one of which was quite nebulous, were sufficient to account for the variance in the twenty-five separate reading measures.

Harris in a 1948 study,[11] identified seven skills or behaviors called for in comprehension of various types of literature, as follows: recognition of synonyms for uncommon words and groups of words; recognition of words or groups of words that are used figuratively; recognition of antecedents of pronouns, or subjects and predicates in loosely organized statements; recognition of summary of ideas expressed or implied; recognition of summaries and characteristics of persons or characters; recognition of author's attitude toward his characters, of his mood or emotion and of his intent; recognition of relationship between technique and meaning.

After administering a battery of tests designed to yield measures on each of these seven skills to two groups of adults, and factor-analyzing the results, Harris concluded that "(1) one and only one ability is common to the comprehension of these literary passages of different types; and that one general factor is adequate to account for the intercorrelations of the seven variables."

Maney and Sochor in 1952 studies[12], [13]sought to develop tests to measure specific factors in comprehension of science and social studies material. Their tests yielded measures of "literal comprehension" and of "critical interpretation" in these two areas. Administering these tests together with the Gates Survey Test and the Pintner General Ability Tests (Verbal Type) to some five hundred fifth-grade pupils, they found correlations from .61 to .67 between the literal and the critical reading scores; from .60 to .76 between these scores and scores on the Gates test; and from .67 to .75 between these scores and scores on the Pintner tests. The "critical" scores correlated slightly lower with the general reading ability or the intelligence test scores than did the "literal" reading scores. Maney and Sochor interpreted the findings as showing considerable independence between literal and critical reading skills, and between the specific abilities required for critical reading and "general" reading comprehension. In other words, they saw a high degree of specificity in the types of processes involved in different reading situations.

Another 1952 study, the doctoral dissertation of Lyman Hunt[14] represents one of the most competent studies in this area. Hunt sought to determine whether the six factors identified by

Davis would reappear in an independent investigation, or, more generally, whether reading comprehension is made up of aspects sufficiently specific to be measurable as independent variables. Hunt developed tests to measure each of the six factors, taking great pains to insure that every item included as part of the test for a given factor was judged with very high consistency by competent consultants to be measuring the ability in question. For a group of 585 college students he first compared item-discrimination values for every item with respect to each of the six postulated factors. Despite the fact that the items had been constructed specifically to measure a carefully defined aspect of reading ability, and had been judged qualified consultants to be measuring that particular ability, Hunt found that in general the items classified in any given area—as, for example, vocabulary items, or items intended to measure reasoning—correlated no higher with the total score on the ability they were supposed to measure than with the score on any of the other abilities. That is to say, there was no evidence in the item-discrimination statistics that the items possessed any differential validity as measures of one aspect of reading comprehension rather than another. Factor analysis of the scores led to the same general conclusion—that, except for the vocabulary test, the other measures "may be measuring much the same function of reading comprehension." Comparing the factor structure revealed in his study with that reported by Davis, Hunt reports emergence of a first factor somewhat resembling Davis' reasoning factor, a second factor similar to Davis' word knowledge factor, though appearing much less important than it did in the Davis study. He found a third factor like Davis' organizing ability, but it accounted for only 8 per cent of the total variance. He also found three other factors, all probably not significant.

A later study by Stoker and Kropp[15] reported a factor analysis of results of Iowa Tests of Educational Development administered in 1959 to a sample of ninth-grade students. Three sub-tests of the Iowa are concerned respectively with ability to interpret reading materials in the social studies, in natural science, and literary materials. Stoker and Kropp found intercorrelations (uncorrected for attenuation) among these three parts from .67 to

.76. A first factor, identified by them as "general mental ability," had extremely high loadings on these three sections and on the Verbal section of the Scholastic Aptitude Test; no other factor contributed significantly to the variance on these parts of ITED. They concluded, therefore, that there were no differentiable reading abilities in the three areas, at least as measured by ITED.

Most of the references cited above have to do with the state of affairs that exist at the secondary or college level. We may very well ask whether reading ability has not become so highly organized at this stage that an individual's performance on all kinds of reading tasks is pretty much of a piece, defying diagnosis or differentiation. It is certainly conceivable that at lower grade levels reading ability is much less highly organized than it is at the high school, college, and adult levels. We may readily suppose that in the beginning stages of reading, emphasis is on the perceptual and mechanical aspects of the task to a greater extent than on central thought processes; and that, since the requisite perceptual skills are being acquired at varying rates by children, there may exist among pupils more readily differentiable degrees of proficiency in various components of reading ability. such a conclusion seems probable, but it should be said, too, that this belief is buttressed by no such amount of experimental data as are available concerning the nature and organization of reading abilities at the higher levels—and indeed, there is some contrary evidence, as in the intercorrelations among the subtests of the Gates Primary Batteries, or the several reading tests of the Metropolitan Achievement Tests. Virtually all of the tests of lower-level reading abilities that purport to be diagnostic are based upon *a priori* identifications of the various reading skills; and however expert one may consider the analysis and the identification, it nevertheless remains true that we still have little experimental evidence about the reality of the distinctions that are made among the various reading abilities and about the validity of supposed diagnostic profiles of reading skills. In the realm of vocabulary, for example, we have measures that are labeled tests of "word recognition," or of "word discrimination," or of "phonetic analysis skill," all of which characteristically yield quite substantial intercorrelations relative to their reliabilities.

IMPLICATIONS

The studies cited above are not the only ones bearing upon the organization of reading comprehension ability, but together they comprise a representative sample of the research in this area. Even from brief recapitulations, one can sense a lack of consistency in the findings with respect to the generality or specificity of comprehension abilities. What are we to make of it all? Shall we conclude that the reading experts, with their lengthy lists of objectives, of finely differentiated, ever more specific skills, have simply been spinning a fanciful web that bears no relation to the realities of the nature of reading ability? Or shall we charge the test makers with a lack of ingenuity in devising test exercises to provide reliably differentiable measures of the several skills, with a failure to provide instruments that will match in their comprehensiveness and sensitivity the goals elaborated by the reading experts? The truth, it seems to me, is to be found between the two extremes. The following discussion is an attempt to make sense of the research findings, and to suggest their implications for the question, "What can be measured in reading?"

One generalization seems to emerge with very considerable support. With distressing sameness, or with gratifying consistency, depending upon one's point of view, the studies agree that most of the measurable variance in tests of reading competence, however varied the tests entering into the determination, can be accounted for in terms of a fairly small number of factors, certainly not more than six being required to account for better than 90 per cent of the variance. One investigator after another has launched his battery of tests, with all segments neatly labeled, carefully segregated and packaged in separate if not watertight compartments, only to have the vessels founder on the shoals of hard data, with the cargo jumbled together in a single heap, or in a few mixed-up collections. It seems entirely clear that numerous superficially discrete reading skills to which separate names or titles have been attached are, in fact, so closely related, as far as any test results reveal, that we must consider them virtually identical.

It would seem that we may recognize and hope to measure reliably the following components of reading ability: (1) a general verbal factor, (2) comprehension of explicitly stated material, (3) comprehension of implicit or latent meaning, and (4) an element that might be termed "appreciation."

The "verbal factor" in this context is intended to connote word knowledge: breadth, depth, and scope of vocabulary. Every investigation shows vocabulary to be substantially related to other measures of reading ability. Extensive word mastery, or fluency in handling words, is almost a prerequisite to attainment of high competence in any type of reading skill. We are well equipped for reliable measurement of this factor at virtually every level.

Under "comprehension of explicitly stated material" is included such skills as the location of specifically stated information, comprehension of the literal meaning of what is written, and ability to follow specific directions set forth in what is read. Many reading tests are available that measure these skills acceptably; probably the most widely used tests measure this type of reading ability to a greater extent than any other.

The third component, "comprehension of implicit meanings," embraces all of those outcomes that we tend to label as "reasoning in reading." Included here would be the ability to draw inferences from what is read; to predict outcomes; to derive the meaning of words from context; to perceive the structure of what is read–the main idea or central thought, and the hierarchical arrangement of ideas within a selection; to interpret what is read, as manifested either by applying the information to the solution of a problem or by deriving some generalizations or principles from it; in a word, all those abilities that demand active, productive, intellectual response and activity on the part of the reader. The research, in my opinion, does support the belief that this type of reading ability can be differentiated from the ability to comprehend what is explicitly stated though we should always expect to find the two correlated because the ability to get at the implicit meaning of what is read presupposes the ability to understand the explicit or literal meaning.

Test makers have been, and are, devoting more effort to the measurement of the inferential, interpretive abilities, and such abilities are well represented in the reading tests produced in recent years. It is perhaps not inappropriate to comment in passing on what seems to be a false issue that has sometimes been raised by those who object that reading tests which stress this factor are too much like intelligence tests. My view is that the intellectual operations or processes that it is common now to include in the notion of reading as a thinking process are indistinguishable from at least some of the operations and processes that we define as comprising "intelligence." In other words, it is inconceivable that a good test of reading as reasoning should not also be a valid measure of some aspects of the complex we term intelligence.

Finally, we have the factor termed "appreciation." By this is means such things as sensing the intent or purpose of an author, judging the mood or tone of a selection, perceiving the literary devices by which the author accomplishes his purposes, etc. Existence of these types of outcome as distinct from the ones enumerated above seems less clearly established by the research findings, but here some of the blame may perhaps be laid at the feet of the test makers, who have, by and large, been less concerned with the development of suitable instruments in this area than in the three general areas suggested above. We may reasonably hope that more satisfactory measures of outcomes of this kind will be produced.

SPEED

Thus far the measurement of our old friend, rate or speed, has been neglected. That speed of reading is an important and desired outcome of reading instruction goes without saying. Evidence concerning the extent to which a pupil is improving in rate of reading is highly desirable in any evaluation of a reading program. Our assessment of rate, however, leaves much to be desired, though paradoxically enough, we are better off today because we have a keener appreciation of the limitations of our speed measures than we were twenty-five or thirty years ago, when it was not uncommon to encounter the belief that measurement of rate was a fairly simple, straightforward operation.

Our problems in the measurement of rate stem from the fact that we are never really concerned with pure speed—that is, with just the rapidity with which the subject can move over a given number of words or lines of written material. Rate is only meaningful as it defines the rapidity with which the reader covers material at a particular level of comprehension. We are all now well aware that an individual's rate is a function of the level of difficulty of the material being read; and some would say also of the type of material, though the experimental data on this question are inconsistent. Indeed, this ability to change rate of reading is accepted as one of the desired outcomes of reading instruction; we want the student to adapt his reading to the demands of the particular material, to move as rapidly or as slowly as the requirements of the material and his own purposes in reading dictate. The question of the relation of speed and comprehension is a perplexing one, to which the experimental data give no single clear-cut answer.

We are troubled also in the measurement of rate by the fact that the test situation poses quite a different motivation for the reader than does the normal, unsupervised reading situation. Unfortunately, from the standpoint of validity the difference between the test situation and the normal reading situation, as far as motivating property is concerned, varies from one subject to another, and our interpretation of rate of reading scores derived in test situations must, therefore, always be subject to some reservation–at least in the case of rate measures obtained when the subject is aware that his speed of reading is being appraised.

Nevertheless, our measures of rate are not without usefulness. For the estimation of change or development, rate measures derived from the same test are quite serviceable. Research, moreover, suggests that while rate measures are not perfectly correlated by any means, there is an appreciable community among the various measures. We thus may identify with a good deal of confidence those readers who are excessively slow; and this is perhaps the most important use of rate measures.

CONCLUSION

As important as what *can* be measured in reading, perhaps, is what *cannot*. There remains the uneasy feeling that no matter how excellent our measure of comprehension, whether of explicit or latent meaning, no matter how clever our techniques for assessing "critical" reading skills may become, our evaluation still leaves much to be desired. Whence this dissatisfaction? Is it sensible to anticipate that we can develop wholly adequate objective measures for "reading ability"? Consider what reading is, or should be. Not only do we read what we read; in the layman's peculiarly apt term, we read *into* what we read—that is, we read something of ourselves into the written word. We bring to bear on the material we are reading our total experience, background, interests, understandings, purposes, and so on. The response that each person makes to a given piece of reading matter, therefore, is necessarily and desirably a unique, personal kind of response. When we set before a student an exercise in arithmetic, or a word to be spelled, or a problem in algebra, there is only one response that is desired and that is to be considered correct. When we are concerned with appraisal of a person's ability to read insightfully and meaningfully, we almost assume that there will be many different but equally acceptable responses to the stimulus material. Under these circumstances it looms as a very difficult task to conceive a completely objective test that will permit us to assess the quality or richness or correctness of each person's interpretation of a given selection.

"Reading," in the words of Francis Bacon, "maketh the full man"—and this neatly epitomizes the goal of reading instruction. It is important for people to learn to read because reading can enrich their lives so enormously. We want people to be able to read the sign that says "Stop," so that they will not endanger themselves and others at crossings. We want people to be able to read the directions, simple or complicated, that enable them to comply and cooperate with the practices necessary for getting along with others. We want them to read because in no other manner can they so readily share in the experiences of the rest of mankind that will inform and ennoble them. for these purposes, surely *what* a person reads is as important as how well he reads it, but I am afraid that we have no measures of the wisdom with which persons make their choices of reading matter, nor have we any measures of the extent to which they profit from their reading in the manner suggested above, and I for one am dubious that we shall ever have such measures.

Like many other students who have considered reading tests, I have suggested that the labels on the tests are perhaps poor indicators of the jobs the tests actually perform. I am less dismayed by this fact than some critics have been, for I feel that it does not preclude the possibility of considerable usefulness and value in these measures. Insofar as uncritical acceptance of test names as representative of their contents leads to erroneous descriptions and improper diagnosis, such names are, of course, harmful. But, in a fortunate way, the very difficulty that surrounds our efforts to develop differentiating measures of various reading skills becomes our salvation in the instructional program. If these abilities are substantially related and overlap to the extent that the various studies make it appear, then it is entirely likely that efforts devoted to improving one or another of the types of skill will carry over to improvements in the other types of skill. There is nothing in the research reports which would lead us to believe that it is fruitless to attempt to set up varied types of goals or outcomes, to prepare exercises calculated to develop power in these several skills, and even to use these analyses as bases for developing tests. Indeed, in no other way can we sensibly plan or conduct the instructional program.

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MEASURING THE READING ABILITY AND POTENTIAL OF ADULT ILLITERATES

Don A. Brown

Many adult residents of our inner cities are seriously debilitated by inadequate formal education or, more specifically, lack of ability to read and write. The extent of illiteracy in this country is difficult tomeasure, yet the seriousness of the problem is underlined by the fact that some 23 million adults, aged twenty-five and older, have completed less than eight years of schooling. Of these, 8 million have completed less than five years of schooling, and are, accordingly, defined as functionally illiterate. In New York state alone it is estimated that 800,000 adults are functionally illiterate.

Functionally illiterate people are frequently dependent on others for financial support; they are often unable to handle their own financial affairs, particularly in matters of budgeting. They are severely limited in social mobility and in cultural participation. Functional illiteracy circumscribes the individual to more and more limited means to cope with a society of ever increasing achievement. Instructional programs must be improved if the needs of these people are to be met, and the keystone to the improvement of these programs lies in better means of measurement and evaluation.

There are three general populations of adult illiterates. One is the dropout population. These persons are usually young men and women who have dropped out of school before completing requirements for a high school diploma. Many of them are unable to read above the fifth-grade level, even though they may have completed eight or more years of schooling. Many federal and state programs are aimed at educating and preparing these young people to support themselves in adulthood.

The second population consists of foreign-born illiterates. A person in this group may be able to read and write quite well in a

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language such as Spanish, Italian, Polich, or German. He must master some English before he will be ready to learn to read, but given a reasonable amount of help, those who are literate in another language and learn to speak English will be able to learn to read and write their new language in a relatively short time.

The third population consists of native-born disadvantaged illiterates, most often Negro or "Appalachian poor white." This population causes the greatest concern and shows the least amount of promise. Its members are often part of the "hard-core unemployed," the last to be hired and the first to be fired. In a civilization that is becoming more technically oriented all the time, they are badly equipped even to maintain their present situation in society, let alone begin to improve it.

Numerous programs have been inaugurated to attempt to teach disadvantaged adult illiterates the basic requirements of reading, writing, and arithmetic. These programs, which are expressions of social concern for those who have so long been relegated to a position of unimportance and unconcern, are under understandable pressures to demonstrate convincingly the effectiveness of the instruction they provide. This is not easy for them to do, first, because the job of training illiterates to read is enormously difficult and slow, and, second, because no suitable evaluation instruments exist.

Unfortunately but perhaps inevitably, many groups concerned with education in the United States, including publishers, teachers, private organizations, and public supervisory bureaus, have virtually demanded that outstanding growth result from the dollars that they have invested. One reason for such demands may be that to some it seems "logical" that an illiterate adult ought to learn to read more quickly than a first-grade child: the greater experiential background of the adult, they think, should have increased his chances of profiting from instruction. They do not stop to consider the possibility that adults who have proceeded through life for twenty to sixty years without learning to read may have developed an extremely poor opinion of their academic ability and chances of success. A first-grade child usually approaches beginning reading instruction with enthusiasm and self-confidence, whereas the adult illiterate usually feels that learning to read will be hard, and he is not at all sure that he will be able to accomplish this miracle.

The great difficulty of teaching adult illiterates to read might have been recognized sooner if proper measurement devices had been available for adult beginning readers. Unfortunately, they were not available, and without proper instruments of measurements and evaluation, it was impossible to tell where the students were when programs were begun, where they were when the programs ended, or even what their potential for profiting from instruction might be. The tests that did exist had mostly been prepared to measure the reading gains of small children, or to best the learning potential of literate adults. (Today, a few adult--oriented beginning reading tests are available; how they compare with children's reading tests, how scores on the tests compare with results from an informal reading inventory, and how they compare with each other are questions that remain to be answered.)

A major problem in measurement and evaluation of adult literacy gains is the lack of agreement and understanding about what constitutes the equivalent of a grade level for adult basic education. It is so difficult to apply elementary school grade level markings directly to adult literacy programs that many programs have apparently attempted to ignore such classifications altogether. This has resulted in a great deal of confusion. At the Buffalo Literacy Research Center a study was made of supposedly "beginning" level reading materials presently in use for adult literacy training. Through the use of readability formulas, rough estimates were made of the level of difficulty of the materials. Although some materials began as low as upper first-grade level, other materials inaugurated "beginning" reading instruction at the fifth-grade level. In some textbook series, the first book of the series was more difficult than the second in terms of the readability formulas. And in several cases, the reading difficulty at the end of the first book was higher than at the end of the second book in the series. In other cases, the reading difficulty increased so rapidly from one lesson to the next that, in the course of the completion of one workbook, a student would supposedly have had to increase in reading ability several grade levels in order to keep pace with the reading material. On the other hand, one beginning reading level workbook made no appreciable gain in difficulty from the first page to the last.

Defective materials of the kind studied result from our lack of practical experience in adult literacy training. Practical experience with children's elementary programs has slowly, and in some cases by accident, given us an understanding of the way materials must be paced for children to learn properly. Without such a background of experience in adult literacy training, many publishers are producing materials which are too difficult and are poorly and improperly paced.

Difficulties in Measuring the Aptitude and Achievement of Adult Illiterates

Since measurement and evaluation are crucial to the improvement of instruction, it is necessary to take a critical look at tests presently being used in the development of better curricula for adult basic education. Until recently adult basic educators have had no choice but to use children's tests as both placement and achievement measures. Measure of potential were drawn from gests available for use with adult *literates.* None of these measures were constructed specifically for use with adult illiterates.

One difficulty in using the same standardized reading tests for adults as for children is that an adult uses a different vocabulary from that which a child uses. Many of the standardized reading tests use such terms as "run," "jump," "play," "baby," "doll," and "wagon." Adults are presumably more interested in learning to read more utilitarian words such as "job," "work," "bus," "payday," "house," and "check." The use of children's tests with adults tends to provide invalid results.

A second difficulty in using children's tests with adults is that the subject matter concepts in the tests are different from those in the reading materials most enthusiastically accepted by adults in literacy training programs. In a study of the reading interests of adult illiterates at the Buffalo Literacy Research Center, adults were found to be most interested in reading materials concerning their own personal and family improvement, jobs, religion, and health. They were least interested in reading children's stories and, in general, the kinds of things contained in basal readers in use in most elementary school reading programs. Unfortunately, adult literacy programs that capitalize on this interest by using special materials are penalized when their students' progress is measured by children's tests, since the tests measure the learning of children's words and concepts.

Perhaps this helps to explain why some programs that are enthusiastically received by adult illiterates, are based on their interests, and are paced to their needs, often produce no more significant reading gains than those programs which simply make use of children's basal readers. Most of the standardized tests in use at the present time are built on the vocabulary and concepts contained in basal readers and, naturally, do not attempt to measure much of the vocabulary and concepts of adult-oriented programs.

A third difficulty with the tests presently being used to measure achievement for adult illiterates is that populations of children are used for standardization. Largely because it is unclear what constitutes a grade equivalent level for adult basic education, test-makers rely on grade school populations to establish norms for most tests. Even for some "adult" beginning reading tests, a perusal of the manuals shows standardization has been carried out using children populations rather than adult populations.

A fourth difficulty in using children's tests with adults is the format of the tests. Some of the elementary reading tests are quite childish in their appearance. This is not the greatest disadvantage of such tests, but the format of adult tests presently in use or under development is certainly preferable. The self-respect and feeling of personal worth of the adult illiterate must be safeguarded; the format of the materials he uses should not suggest that he is a child.

The general format of test books and answer sheets should reflect the fact that adults often have had almost no instruction on how to take a test. We begin testing elementary school youngsters almost as soon as they enter school, and by the time they are in the third grade, we expect them to know how to handle an answer sheet and how to proceed through the test booklet. Adults "look" as though they ought to be able to handle the situation also. As a matter of fact, however, they have had little or no preparation as to how to take a test. They suffer particularly from confusing answer sheets. One of the more promising adult basic tests recently on the market makes use of an answer sheet that has been found to be quite difficult for many of the students in adult literacy programs.

The adult illiterate often has more difficulty than the first-grade child in handling a pencil and paper. Although an adult may not squirm as much as a first-grade child, prolonged testing sessions are highly uncomfortable for him, and he has difficulty maintaining interest and attention over a long period of time. He often suffers from visual problems that are undiscovered until he is required to do close work. In addition, he has more difficulty following directions than his maturity would indicate.

It is altogether too easy to assume that adults can handle the task of test-taking without any problems. The wise examiner will realize that they have had little or no instruction and that they may wonder whether they are to proceed down or across the page, whether they are to turn the page and continue the test or should stop, what they should do when they come to an item and do not know the answer, and so on. Part of the burden of getting good test results lies in teaching adult illiterates explicitly what one must to in order to take the tests.

Assessing Reading Gain

The evaluation of programs and materials is often made largely in terms of reading gain as measured by pre-testing and post-testing. Good testing practices are therefore a prerequisite to the accurate evaluation of programs and materials. The following guidelines to testing should be helpful.

Tests ought to be used that are compatible with the general level of performance of the students. The writer visited one literacy program that was having difficulty in assessing the abilities of its students. He found that although most students in the program were unable to read above third-grade level, they had been given a test designed to measure reading ability for students with fifth- to seventh-grade abilities. The test must be fitted to the student. Sometimes a preliminary screening test will yield a rough approximation of the ability of the student to be tested, thus permitting the teacher to choose the proper level of test.

Test scores must be carefully interpreted. Tests don't measure certain kinds of reading progress; they also do measure gains that are not true reading gains. Many adult illiterates must go through the process of developing readiness to profit from reading instruction before they will make satisfactory gains in their ability to read. Readiness tests are rarely given to adults, however. Students who need readiness training will usually score at a low first-grade level when they are tested by a standardized reading measure. A test given after the end of the period of instruction may show that there has been little or no gain. When in reality there may have been considerable progress in developing *readiness* to profit from instruction. The lack of gain on the standardized tests is discouraging to the student, discouraging to the teacher, and discouraging to the administrators of the program–even though the student is actually profiting from instruction, and no one ought to be discouraged.

In the course of the Buffalo study of reading interests previously mentioned, a number of students recorded little or no progress during the first year of instruction but quite satisfactory gains during the second year. In the opinion of the research staff, these scores indicated that, during the first year of instruction, the students had been acquiring the underlying abilities or readiness that they needed to be able to profit from reading instruction. Pre-test and post-test scores during the first year of instruction, however, showed little or no gain.

Tests not only fail to measure some forms of reading progress; they measure some forms of progress that are actually not true reading gains at all. When an adult illiterate takes his first test, he is often still unfamiliar with the school, unaccustomed to test-taking, and has not begun to recall skills that at one time he had learned but that now have fallen into disuse. His performance on the first test will therefore understandably be much poorer than his performance on the second taken at the end of the program. Many programs that report sizable gains for the truly low-level illiterate need to investigate their pre-testing techniques to be sure that they are not giving the first test under stressful conditions and that they have allowed enough time for the student to become adjusted to the school situation.

Illusory reading gains also may result from the use of different tests for pre-measurement and post-measurement. One school visited by the writer tested all incoming adult illiterates with the *Gray Oral Reading Test* within a few minutes of the time that they arrived in the school building. The student was taking a strange test from a person in authority whom he did not know, in strange surroundings, creating a most stressful situation. The results of the test were later compared to the results of another test, a standardized reading test designed for third graders, administered at the end of the school year. The two tests tested different abilities: the *Gray Oral Reading Test* measured oral fluency and word recall, while the standardized reading test measured ability to recognize word meanings and understand paragraphs while reading silently. The tests were given under totally different circumstances and were standardized on different populations. Yet the results were reported as though the differences between the two represented true gains in reading ability. This was obviously a faulty practice.

Occasionally the inadequacy of existing tests will lead an evaluator to attempt to assess a program's effectiveness simply by tabulating the levels of material through which the students have progressed. He may cite the fact that the students began at "Level One" and proceeded through "Level Eight" as evidence that they have gained eight grade levels in reading ability during the course of the program. Although such statements of progress are heartening to the administrators and funders of the programs, they are highly inaccurate.

It is most difficult to produce gains in reading ability when the students are adults with less than third-grade reading achievement. There is little evidence to suggest that any program teaching adult illiterates with reading ability below the third-grade level can raise the mean level of the class in excess of three years in two hundred hours or less of reading instruction. Larger recorded gains are usually erroneous. Perhaps the students began reading at the first-grade level although they actually were able to read fifth-grade or sixth-grade material. Or perhaps their "success" in the program was that they were judged to be reading in fifth-, sixth-, seventh-, or eighth-grade level material without the confirming evidence produced by any sound evaluative instrument—either (1) a standardized test properly administered or (2) the instructional level on an informal reading inventory (discussed below). Simply moving through "levels" does not constitute gain any more than being measured once while stooping and a second time while standing on a chair changes a man's height.

Although not commonly used, informal reading inventories offer one of the better means of assessing reading gains. The informal reading inventory is a sequence of reading materials of increasing complexity; the examiner uses it to determine the highest level at which his students may read instructionally or independently. The advantage of this technique is that the inventories may be based on the reading material that the student is actually using. The disadvantage of the technique is that we have no well-established levels of performance for adults comparable to the grade levels for the elementary school. This makes it difficult to get a sequence of materials of increasingly difficult levels.

New tests are badly needed that are built on adult-oriented interests, standardized on adult populations, and complete with different forms and different levels. Progress has recently been made; it is hoped that these early efforts will continue and the products will be improved.

Assessing Potential

Potential is assessed by measuring manifestations of a person's ability to learn from his environment. Basic to this is the assumption that all persons to be tested must have experienced a somewhat similar environment containing somewhat similar opportunities to learn. Unfortunately, a sizable proportion of adult illiterates does not share the pool of common experiences on which most tests of potential are based. This means that these tests do not measure ability to learn from one's environment *for these people*. Their low test scores do not mean, therefore, that they are unable to learn, but only that they have never had the opportunity to learn the information needed to do well on the test.

For example, if an adult illiterate has never been taught that the sun rises in the east and sets in the west and that if he faces west, north is to his right and south is to his left, he would not be expected to know the directions. If we then try to test his potential for learning by saying, "If you walk north one block, then turn left and walk another block, what direction would then be to your left?" we are not able to assess his intellect or potential. We cannot say he has no potential because he did not have an opportunity to learn the elements on which we based the test of potential. (If he had had such an opportunity and had not learned, then we might be able to say something about his learning ability.)

To repeat, most tests of potential for adults presume that the individual has acquired certain common skills and information. The subtest of coding in the *Wechsler Adult Intelligence Scale* presumes that each person taking the subtest has had an opportunity to learn how to use a pencil and paper and to follow verbal directions. If, in fact, a person has not had that opportunity, the test can give no indication of his intelligence. Equally suspect as intelligence measures are tests of common knowledge such as the following items from the WAIS information subtest: "Where does rubber come from?" "Name four men who have been President of the United States since 1900." "Longfellow was a famous man. What was he?" The WAIS vocabulary subtest asks the individual to define a number of words such as "fabric," "conceal," and "enormous." Such questions and tasks measure academic learnings that adult illiterates, whatever their intelligence, have rarely had an opportunity to acquire.

The basic means by which adults gain information today is through reading. Adult illiterates are at a disadvantage because they simply cannot use the avenue most adults use to instruct themselves. Generally speaking, tests of intelligence for adults tend to discriminate heavily against illiterates, and instead of testing their potential for profiting from instruction, they simply measure the extent to which they have been unable to receive instruction—most of which they have been unable to absorb because of their illiteracy.

Proof that present-day tests of potential do not identify learning abilities within the adult illiterate population lies in the fact that not even the WAIS, considered to be a paragon of such measures, was able to satisfactorily discriminate between adult city-core illiterates who made gains in learning to read (demonstrating their potential to learn) and those who did not make gains (indicating lesser potential in terms of learning ability).

Scores on tests of adult learning potential are sometimes advanced as "proof" that the poor education of adult illiterates or various minority groups is attributable to intellectual inferiority. Since tests of adult potential are commonly based on academic learning which many adult illiterates could never have acquired, such a conclusion is unwarranted.

The poor quality of existing aptitude tests does not mean that the potential of the adult illiterate is absolutely unfathomable. During the Buffalo study, certain factors were identified as indicative of ability to profit from reading instruction. They included.

1. Expressed preferences for certain book titles
2. Ability to grasp analogies illustrated with common items
3. Ability to see missing parts in common, simple pictures
4. General reading ability of the subject's family
5. Ability to arrange pictures in logical sequence
6. Ability to trace a path through a maze
7. Understanding certain functional information such as handedness and directions.

An item analysis of the numerous variables presented to the subjects during the study will perhaps yield the information necessary to create a test able to show the potential of adult illiterates to profit from reading instruction. Certainly an accurate aptitude test is vitally needed by the teachers of adult illiterates.

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CAN WE USE EXISTING TESTS FOR ADULT BASIC EDUCATION?

Robert G. Whittemore
Ben P. Echeverria
John V. Griffin

If you wished to test a second or third grade child for aptitude, intelligence, or another dimension, you could probably find a great number of standardized tests that have worked previously. The problem is solved with relative ease, as norms have been established and tests have been developed specifically for children.

But with the advent of classes in *adult* basic education, we tried to test grown persons of this achievement level (0-8 grade level)—those who possibly are socially mature but who may have hundreds of unseen reasons for non-learning, or who resent being tested like some laboratory specimens. No norms for such persons had been established, and we really did not know the answers to *any* of the following educational questions:

What do we want to know about these adults? Why?

What tests validly measure what we want to know about these adults?

How can we evaluate our classes in adult basic education through a program of testing?

Can existing tests be used to group adults in classes of basic education? What is the most effective way of grouping? Is grouping in fact important?

Is it economical to give adults existing tests?

Even the development of the above questions is not enough to arrive at an understanding of the testing problem related to the functional illiterate.

Experience and trial by error were involved in this study which, we feel, greatly adds to our limited knowledge of these trainees.

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The Problem

Many existing employment opportunities, even those which can be clearly delineated by use of existing measurement devices, require (as a minimum) a reading level, a general numerical ability level and an over-all performance level approximating that reached by sixth grade students. One of the major problems in some segments of the MDT program has been that a number of MDT applicants did not attain the level of intellectual functioning found among the "general working population."[1] Significant problems existed when training for an employable skill was precluded by inadequate levels of general functioning.

In December 1963, an amendment to the basic MDT act was enacted which "would provide basic educational training to enable the unemployed to attain a level of preparation which will qualify them for regular occupational training opportunities."[2]

This project sought to develop additional applications of existing knowledge about MDT applicants who could not benefit from MDT training programs unless they had instruction in Basic Education experiences. The project tried to answer the questions:

At what level of ability are these people?

What personality dynamics are in existence?

What methods of measurement are most efficient in measuring the improvement in their societal functioning as a result of Basic Education training?

Specific subsections of this report are?

Determining the best testing devices that can be used to discover various areas of homogeneity in trainees enrolled in MDTA classes involving Adult Basic Education.

Finding the most effective way of measuring the reading and computational levels of such trainees.

Analyzing the common personality dynamics of such trainees.

Compiling a standardized system of testing for the above three areas that teachers and counselors of Adult Basic Education trainees could employ to improve their understanding of such trainees, thereby enabling them to teach such trainees more effectively.

Selection

As is indicated by the report of the Secretary of Labor, the United States Employment Service attempted to screen all applicants for MDT training. Simply stated, the U.S.E.S. personnel used an excellent instrument (the GATB) in a fine job of counseling. "The local employment service office selected unemployed or part-time workers and referred them to the training facility where they were enrolled by school authorities. The regular counseling and testing procedures of the local offices tended to screen out some of the poorly motivated and the socially and educationally deprived because of their low levels of reading and mathematical achievement."[3]

This selection and referral process prevailed in both the Las Vegas and Reno areas. Major information available from the local employment service office was promptly sent to the schools and used in making the first selections. The local employment service offices, realizing that their counseling and testing procedures were not wholly applicable to these trainees, were most cooperative with the local districts. The MDTA classes which were used in this study were taken from the MDTA programs operating in Las Vegas and Reno, Nevada.

Trainee Background

A general description of the groups used in this study should help future investigators understand the nature of this research project. The groups were delineated according to age, educational level, and GATB "G" score.

Table I gives statistical information by group for the major delineations as described above.

TABLE I

			AGES			ED. LEVEL			GATB "G"		
CLASS	"N"	LOCATION	Range	Mean	Md.	Range	Mean	Md.	Range	Mean	Md.
5006	19	Reno	18-54	32.5	29	04-12	9.7	10	73-110	93.7	98
208	25	L. V.	18-69	30.3	28	05-12	9.3	10	41-102	82.2	84
5018	13	Reno	23-68	40.7	45	12-13	12.0	12	87-148	114.7	116
219	62	L. V.	18-52	27.6	25	06-12	10.2	10	63-112	93.1	92
222-1	7	Reno	18-47	28.2	22	08-12	9.8	10	81-117	93.8	90

The Las Vegas trainees (N = 87) were primarily Negro and female with only five trainees being Caucasian and two trainees being male. The Las Vegas trainees had a slightly wider range of ages with more than one-half of the trainees (Median) being 28 years or older. The median claimed educational level of the Las Vegas trainees was ten years and ranged from five years to twelve years. The "G" score of the GATB was used by Employment Security as a general indication of intelligence. The Las Vegas trainees had a "G" score range of 41 to 112 with a mean of 88.8.

The three groups of the Reno MDTA trainees (N = 39) were more heterogeneous than the two groups of Las Vegas trainees. The Reno trainees consisted of four Negroes, thirty-five Caucasians, with thirty being female and nine male. The median claimed educational level of the Reno trainees was 10.2 and ranged from four to thirteen years. The Reno trainees had GATB "G" scores ranging from 73 to 148 with a mean "G" score of 101 for all trainees (N = 39). It should be stated clearly that Reno MDT Class 5018 was incorporated into this study as a contrast group. The IQ scores and educational level of this group are significantly different than scores and educational level of other groups.

Comparison of Groups

Group comparisons were made by statistically comparing the mean ages, educational level, and GATB "G" score of the Las Vegas and Reno groups. The results of these comparisons along with the report of tests of significance of the differences between means (computed to the .01 level) are presented in Table II.

General Group Dynamics

The senior researcher had been involved in establishing the basic education classes in Las Vegas, and had more first-hand knowledge concerning the group dynamics of the Las Vegas classes. Also, the Las Vegas program employed full-time MDTA counselors, so these classes had been afforded the opportunities of both individual and group counseling. The Reno MDTA program did not have counselors and much of the testing required for this research project had to be done on a contract basic.

TABLE II

A. Analysis of Differences in Mean Scores.

GATB "G"

	5006	208	5018	219	222-1
5006		Sig Diff .01 level	Sig Diff .01 level	No Sig Diff	No Sig Diff
208			Sig Diff .01 level	Sig Diff .01 level	Sig Diff .01 level
5018				Sig Diff .01 level	Sig Diff .01 level
219					No Sig Diff

B. Analysis of Differences of Mean Educational Level.
MDTA Class 5018 was significantly different from all others, and there was no other group significantly different with regard to educational level.

C. Analysis of Difference of Mean Ages.
MDTA Class 5018 was significantly different from all others, and there was no other group significantly different with regard to ages.

The group dynamics generally prevalent among adult education classes were apparent in the MDTA classes of this study. Much descriptive material was available in already printed reports which describe these general dynamics; examples of the reports are the *Delaware Multi-Occupational Project,*[4] *Education and Training,*[5] *Educationally Deficient Adults,*[6] *Manpower-Research and Training,*[7] *Training the Hard-Core Unemployed.*[8] The single greatest dynamic factor of MDTA classes in these studies appeared to be the initial lack of trainee motivation to learn via classroom experiences. However, this factor did not seem to be present in the classes in this study.

Testing Instruments

There is a dearth of information concerning the efficacy of instruments in the identification of and placement of MDTA trainees. The longitudinal nature of this study should be recognized since the total testing time was eighteen months. Several instruments originally identified by the senior researcher as suitable for evaluation of intelligence, achievement, aptitude, interests, reading and personality, did not prove successful.

Various instruments given at different times during the eighteen months to five different groups include:

Intelligence:	Henmon-Nelson Test of Mental Ability Grades 9-12, Form A California Short Form Test of Mental Maturity Level 3, Grades 7-8, 1963 Otis Quick Scoring Mental Ability–Beta Test Revised Beta Examination
Achievement:	Sequential Test of Educational Progress, Level 3 Grades 7-8-9
Aptitude:	Differential Aptitude Test, Form L, Grade 9
Interest:	Kuder Preference Record–Vocational Form CH
Personality:	Minnesota Multiphasic Personality Inventory California Psychological Inventory
Reading:	Iowa Silent Reading Test

The Henmon-Nelson Test was designed to measure those aspects of mental ability which were important for success in academic work and in similar endeavors outside the classroom. This test was easily administered, relatively non-threatening and easily scored.

The California Short Form Test of Mental Maturity, Level 3, has been described as an instrument for appraising mental development or mental capacity. The test included a good number of nonverbal items and was easily administered and scored.

The Otis Quick Scoring Mental Ability Beta Test is a widely used verbal intelligence test. The test does "furnish a short and easily scored indicator of scholastic aptitude."[9]

The Revised Beta Examination is a well known revision of the earlier Army Beta test which provides a measure of mental ability without requiring the subject to read. One other major advantage is that the Beta IQ is similar in statistical meaning to a Wechsler Individual Intelligence test IQ score.

The Sequential Test of Educational Progesss, Level 3, is a relatively new test which is accepted as an achievement test. It purportedly measures outsomes of formal and informal instruction which might have been acquired from a number of school courses and other educational experiences. "STEP is a superior bettery on all counts ranging from the technical aspects of construction to the manner of preparation of test booklets and readable manuals."[10]

Differential Aptitude

The Differential Aptitude Test, commonly accepted as one instrument that approximates the Technical Recommendations for Psychological Tests and Diagnostic Techniques, attempts to measure Verbal Reasoning, Numerical Ability, Abstract Reasoning, Clerical Speed and Accuracy, Mechanical Reasoning, Space Reasoning, Spelling and Grammar. Thorough directions, adequate norms and extensive research combine to make this a useful instrument.

The Kuder Preference Record Vocational Form CH is a widely used inventory for measuring an individual's interest in activities related to broad classes of occupations or to specific jobs . . . It assesses preferences in ten general vocational interest areas, including Persuasive, Artistic, Literary, Musical, Social Service, and Clerical.

The Minnesota Multiphasic Personality Inventory (MMPI) "is a psychometric instrument designed ultimately to provide in a single test, scores on all the more important phases of personality. The point of view determining the importance of a trait in this case is that of the clinical or personnel worker who wishes to assay these traits that are commonly characteristic of disabling psychological abnormality."[11]

Behavioral Tendencies

The California Psychological Inventory is a "480-item true-false questionnaire for normal individuals, based on the Minnesota Multiphasic Personality Inventory, which provides eighteen scales measuring easily understood and socially desirable behavioral tendencies rather than esoteric and pathological characteristics. Its emphasis on universal behavioral tendencies makes it applicable from adolescence through adulthood, particularly in settings where one is interested in identifying and maximizing the positive and favorable personality assets of individuals."[12]

The Iowa Silent Reading Test is designed to measure economically, accurately, and reliably the proficiency of elementary level students in doing silent reading of the work-study type. Six subtests are developed: (1) Rate and Comprehension, (2) Directed Reading, (3) Word Meaning, (4) Paragraph Comprehension, (5) Sentence Meaning and (6) Location of Information.

Length of time needed and cost for the above items is presented in Table III.

TABLE III

TEST	TIME (min)	COST*
Henmon-Nelson Test of Mental Ability (Houghton-Mifflin Company)	30	3.50 per 35 tests
California Test of Mental Maturity (California Test Bureau)	41	4.90 per 35 tests 1.75 per 35 ans. sheets
Otis Quick Scoring Mental Ability Test Beta Form CM (Harcourt, Brace & World)	30	3.10 per 35 tests 1.80 per 35 ans. sheets
Revised Beta Examination	30	4.50 per 25 tests
Sequential Test of Educational Progress (4 tests times 70 minutes) (Psychological Corporation)	280	4.00 per 20 for each test
Differential Aptitude Test Form L (Psychological Corporation)	181	15.50 per 25 tests 10.00 per 50 ans. sheets
Kuder Preference Record–Vocational Form CH (Science Research Associates)	45	11.00 per 20 tests 2.60 per 20 ans. pads .70 per 20 profile leaflets
Minnesota Multiphasic Personality Inventory (Psychological Corporation)	Untimed	5.50 per 25 booklets 4.00 per 50 IBM ans. sheets
California Psychological Inventory (Consulting Psychologists Press)	45-60	6.25 per 25 booklets 3.75 per 50 ans. sheets
Iowa Silent Reading (Harcourt, Brace & World)	49	4.50 per 35 booklets 2.45 per 35 IBM ans. sheets

*Prices taken from current catalogs and are subject to change.

Administration and Scoring-Recording

The testing instruments were administered during the regular class time in both the Reno and the Las Vegas MDTA classes. The Las Vegas test administration was part of the regular MDT Counselor's duty, and the counselor was also responsible for scoring and recording test data. The Reno MDTA classes did not have a counselor, so only a small amount of the testing was completed when the researchers began this study. Consequently, pretest and post-test information about the Reno groups was sketchy.

Test scores and unscored answer sheets were transmitted to the researchers by administrators and counselors of the Reno and Las Vegas groups. The researchers selected the areas of particular interest to this study from among all the available data. The selected data were recorded on large work sheets and then punched into IBM cards by the Wooster High School MDTA Keypunch Class using equipment purchased with MDTA funds.

Analysis of Data

Early in the study, several subjective evaluations of the adequacy of certain instruments were made. Administration of the Henmon-Nelson Test of Mental Maturity (Grades 9-12) was a mistake. Previous information about an average grade completion of 9.9 was not confirmed by this test. The test is a worthwhile test, but it was not subjectively nor statistically (i.e., no significant difference between pre- and post-treatment mean scores) applicable to this group. It was dropped from further use in these classes.

The Sequential Test of Educational Progress did not appear feasible on three bases: (1) Cost is too great for use in any widespread testing program. (2) The time necessary for administration (280 minutes) seems too great for incorporation into a rapid program such as this. (3) There was no statistically significant difference in mean pre- and post-treatment scores. In fact, there was a decrease in mathematics mean scores after sixteen months in class. It was dropped from further use in these classes.

The MMPI was used in an attempt to eliminate any student who manifested a disabling psychological problem. Though little reluctance to answer was noted, most of the trainees spent considerable time (an average of two hours and fifteen minutes) in completing this inventory. Two skilled technicians analyzed the individual profiles and the group means on each scale. All but one of the raw score mean scores (with K added) fell within the accepted 30 to 70 "t" range, and the profiles (both pre- and post-treatment) were identified as "normal profiles." Researchers are well aware that individual trainees might manifest serious personality disturbances (as reflected on the MMPI), but the absence of any gross pattern precluded continuing with the MMPI.

Significant Correlations

As is indicated in Table IV, significant correlations (at the .05 level) existed between a number of variables. Though they are presented in general terms, certain specific correlations should be stressed. Correlation at the .01 level of significance were:

GATB "G" score with Otis IQ score.

Otis IQ score with DAT Sentences.

Table IV. Correlation of Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ED. LV	1		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
GATB "G"	2			X	X	O	X	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X
PRE IQ	3				X	X	X	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X
DAT V	4					X	X	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
DAT N	5						X	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X
DAT A	6							O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
DAT C	7								O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
DAT SP	8									X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
DAT SE	9										O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X
KUDER C	10											O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
KUDER P	11												O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
KUDER L	12													X	O	O	O	O	O	O	O	O	O	O	O	O	O	O
KUDER S SER	13														O	O	O	O	O	O	O	X	O	O	O	O	O	O
KUDER CLER	14															O	O	O	O	O	O	O	O	O	O	O	O	O
CPI D	15																O	O	O	O	O	O	O	O	O	O	O	O
CPI WB	16																	X	X	X	X	O	X	O	O	O	O	O
CPI RE	17																		X	X	X	O	X	O	O	O	O	O
CPI SC	18																			X	X	O	X	O	O	O	O	O
CPI TO	19																				X	X	X	X	O	O	O	O
CPI AC	20																					X	X	O	O	O	O	O
CPI AI	21																						X	X	O	O	O	O
CPI IE	22																							X	O	O	O	O
CPI PSY	23																								O	O	O	O
IOWA AB	24																									X	X	X
IOWA WB M	25																										O	X
IOWA SE M	26																											X
REV IQ	27																											

O–indicates that fewer than 3 of the 5 groups tested reached a significant level of correlation.

X–indicates that 3 or more of the 5 groups tested reached a significant level (.05) of correlation. The X rating was applied only in those cases wherein group 219 yielded a signifianct level of correlation (.05>), and at least two other groups also yielded a significant correlation.

DAT V score with DAT Sentences.

CPI Well-being score with CPI Self-control.

CPI Well-being score with CPI Achievement-through-conformance.

CPI Well-being score with CPI Intellectual-efficiency.

CPI Achievement-through-conformance with Intellectual-efficiency.

Iowa Composite with Revised Beta IQ score.

Iowa Word-Meaning with Revised Beta IQ score.

One might reasonably expect high correlations between the GATB "G" score and Otis IQ score. The high correlations between the CPI Achievement-through-conformance and Intellectual-efficiency is not completely unexpected, but the high correlations between scales in different categories is interesting. The correlation coefficients reflect the same trend as is indicated in the CPI manual,[13] but the correlations are even higher than those reported by Gough.

The high correlations obtained between the Iowa Rate and Comprehension and the Revised Beta and the Iowa Word-Meaning and the Revised Beta do not seem to support the commonly accepted concept of intelligence.

Changes

The Null Hypothesis for all the pre- and post-treatment data is presented in Tavle V. As is indicated in Table V, certain significant changes did take place as a result of the learning experience offered the trainees in Basic Education. Though the trainees received mean scores on the DAT V which approximated the ninth grade norms given in the DAT manual, the tremendous increase in numerical capacity indicated by the post DAT N scores still left the trainees well below the eighth grade level of competency.

The mean IQ scores received on the California Test of Mental Maturity (both pre- and post-treatment) are around that area (80 IQ) which is quite frequently used as indicating some degree of mental retardation. The researchers caution against any such interpretation without considering the cultural background from which most of these people came.

The results of the two testings with the CPI are most

TABLE V

TESTS OF HYPOTHESES

Null hypothesis = no significant difference between pre-treatment and post-treatment mean scores on indicated instruments.

CLASS	INSTRUMENT	PRE-TREATMENT		POST-TREATMENT		
		N	$\overline{X}$	N	$\bar{X}$	T
208	DAT V	23	12.65	23	20.78	3.58***
219	DAT V	62	16.53	62	18.61	1.46*
208	DAT N	23	4.52	23	11.96	5.81***
219	DAT N	62	10.37	62	13.81	3.51***
219	CTMM	62	79.7	62	80.4	.23 N.S.
219	Otis	62	84.3	62	89.73	1.67*
219	CPI					
	Dominance	62	24.9	62	25.6	.62 N.S.
	Well-being	62	31.8	62	34.8	3.00***
	Responsibility	62	28.3	62	29.4	1.12 N.S.
	Self-control	62	30.1	62	33.1	2.04**
	Tolerance	62	16.1	62	18.3	2.31**
	Achievement-conformance	62	25.7	62	28.2	2.80**
	Achievement-independence	62	13.9	62	15.5	2.20**
	Intellectual-efficiency	62	32.4	62	34.7	2.36**
	Psychological-mindedness	62	9.7	62	10.5	.82 N.S.

* Significant at .10 level
** Significant at .05 level
*** Significant at .01 level
N.S. Not Significant

interesting. An over-all measured improvement in Self-concept seemed obvious. Particularly significant was the improvement in scores of Well-being. Though the trend in Responsibility and Psychological-mindedness was favorable, significance was not reached. The researchers hypothesized that the very slight increase in Dominance might signify some lessening of aggressive tendency. The researchers believe that the general trend of the profile is potentially valuable in the business world.

Conclusions

This study was developed to examine, both on the basis of correlational study and statistical inference, the utility of certain testing instruments as applied to MDTA Basic Education classes. The study was limited by the difficulty of control and the necessity of interrupting the treatment at a dimensional point in time to administer instruments for post-treatment comparison.

Certain instruments have been found to be useful in placement and in evaluation of progress. Others were not applicable to these groups.

Recommendations

The following recommendations are the result of much study of the current data and the relative paucity of other research in this area:

A. For Homogeneous Groupings in Classes the Researchers recommend the following:

1. Use of the GATB "G" score as an initial placement device. This should be done on a simple ranking basis. Though correlational analysis does not imply cause-effect relationships, the correlation of the GATB "G" with other factors is high enough (quite frequently at the .01 level) to warrant paying close attention to it in the placement procedure.

2. Administration of the Revised Beta for further clarification of class make up. This was a good instrument in this study as well as in the Delaware[14] and Norfolk[15] studies.

3. Administration of the California Test of Mental Maturity for language and non-language capacity identification.

B. For Measuring Reading and Computational Levels the Researchers recommend the following:

1. Iowa Silent Reading Tests (used and found acceptable in this study), or

2. Gates Reading Survey (found to be quite useful in the Washington[16] study).

3. Differential Aptitude Test for placement in computational courses. (Teachers and counselors alike were most pleased with the results of the DAT Numerical used as a sectioning instrument.)

C. For Measuring Personality Dynamics, the Researchers recommend the:

1. California Psychological Inventory.
2. Kuder Interest Inventory.

(These are most useful as excellent counseling tools and can be understood and interpreted relatively easily.)

An analysis of the time and cost factor involved in such a testing program would indicate approximately seven hours of testing time and an initial cost per trainee of $2.85.

FOOTNOTES

[1] Andrew L. Comrey, "Review of the *General Aptitude Test Battery*" in *The Fifth Mental Measurements Yearbook*. Highland Park, New Jersey: The Gryphon Press, 1959, pp. 695-697.

[2] Willard Wirtz, *Manpower Research and Training*. Washington, D.C.: U.S. Government Printing Office, 1964, p. 6.

[3] *Ibid.*, p. 10.

[4] Harold Edgerton, *The Delaware Multi-Occupational Project*. Washington, D.C.: Performance Research, Inc. 1964.

[5] Anthony J. Celebrezze, *Education and Training*. Washington, D.C.: U.S. Government Printing Office, 1965.

[6] Anthony J. Celebreeze, *Educationally Deficient Adults*. Washington, D.C.: U.S. Government Printing Office, 1964. Prepared and first published by McGraw-Hill, Inc.

[7] Wirtz, *Manpower Research and Training, loc. cit.*

[8] William M. Cooper, *Training the Hard-Core Unemployed*. Washington, D.C.: U.S. Government Printing Office, 1964. OE-13027.

[9] D. Welty Lefever, "Review of the *Otis Quick Scoring Mental Ability Beta Test*" in *The Fifth Mental Measurements Yearbook*. Highland Park, New Jersey: The Gryphon Press, 1959, p. 499.

[10] Lawrence Siegel, "Review of the *Sequential Test of Educational Progress*" in *Journal of Counseling Psychology*, V (Spring 1958), pp. 73-74.

[11] S. R. Hathaway and J. C. McKinley, *The Manual for the Minnesota Multiphasic Personality Inventory*. New York: The Psychological Corporation, 1951, p. 5.

[12] *Test Booklet*. Beverly Hills, California: Consulting Psychologists Press.

[13] Harrison G. Gough, *Manual for California Psychological Inventory*. Palo Alto, California: Consulting Psychologists Press, 1960, p. 33.

[14] Edgerton, *op cit.*

[15] Cooper, *op. cit.*

[16] Celebrezze, *Education and Training, op. cit.*

PART VI

ORGANIZING FOR INDIVIDUAL DIFFERENCES: METHODS AND MATERIALS

NON-THREATENING EDUCATION FOR OLDER ADULTS

Leroy E. Hixson

For six years, the Institute of Lifetime Learning in Washington, D. C. has been at work trying to provide an adult education program especially designed and suited to the retired or older adults. The Institute, a service of the National Retired Teachers Association and the American Association of Retired Persons, has developed a concept entitled "non-threatening education for older adults". Its implications offer a challenge to all in the field of education, both adult and gerontological. While much of it still remains to be documented and further refined, it does offer some directions to all who are interested in continuing education for our rapidly increasing older population. The Institute of Lifetime Learning is by no means the only organization offering educational programs for older people, nor is it the only group studying this potential area. But some of its experiences and conclusions are worth looking at.

Of course, most educators would like to feel that all education is non-threatening. Yet there is much threatening our students in the present educational system. Retirees and older adults do have less and less to be threatened with. Their careers are behind them. They have raised their families and many of their goals have been achieved--status and prestige are not as important. The pace of life is slower and is more relaxed, particularly if good health is maintained. However, as the late Dr. Ethel Percy Andrus, founder and President of these two Associations, emphasized, learning never ceases. People with intellectual curiosity are ageless and so interested in what is going on around them, they are vibrantly alive and a pleasure to others.

The climate among older adults is very conducive to the development of a non-threatening approach to their continuing education. Some of the factors that seem to exert great influence

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in this non-threatening approach include the learning environment, the teaching method, orientation of the learning process, psychological interactions, semantics and motivation.

Most apparent in a non-threatening older adult education program are the very surroundings in which the program takes place. The emphasis is on creating a non-classroom atmosphere. Carpeted floors, drapery, pleasant colors and comfortable upholstered chairs are essential. In many instances body contours no longer fit the traditional school room desk or chair designed for younger students. Informal meetings gathered around tables rather than in rows of chairs are more desirable. In other words, the environment should resemble a comfortable lounge or living room.

Special attention must be given to safety. Older people are not as agile as they once were. Carpets must lie flat and masking tape should be used to hold down edges, especially at doors. Chairs must be sturdy as well as comfortable. Extra chairs, coffee tables, lamps or other objects over which a person could trip should be removed. Wires to all electrical equipment should be taped to the carpet and placed as close to the room edges as possible. If a wall blackboard is not available, a portable board should be placed where it is least likely to be in the way. It goes without saying that proper lighting, keeping the older person in mind, and adequate ventilation are a necessity.

The comfort of the student is placed ahead of subject matter. Teaching is at a slower pace. The teacher needs a great deal of patience, and needs to identify with the student without losing a leadership position. Instructors are especially conscious of diction. They speak slowly and distinctly as older people often don't hear or comprehend as quickly as they did when younger. Every effort is made to keep the students active in a directed discussion of the subject.

Homework is never assigned. A skilled teacher can inspire the student to do extra work at home or outside of class for the sake of his own interest in the subject--not because it is assigned. No grades, tests, examination finals, or term papers are given. All of these tend to threaten the student by placing him in a competitive situation with the other students, the teacher or himself.

Semantics can be threatening to the older adult. Many adults grew up in a school system not as advanced in its techniques as it is today. For these people, education was a distasteful experience. Some did not go beyond elementary or secondary schools. Memories of unhappy experiences still remain. Even among the more educated some have a feeling of "saturation" of schooling. Notwithstanding the above, the learning process never really stops throughout the entire span of life. Therefore, we need to find a new set of terms for this continuing process which does not threaten or inhibit this group.

The word "school" in itself is a threatening term. Instead we should use the terms "seminars", "discussions", "sessions", or "institutes". Classes or courses become "meetings". Semesters are no longer of significance to older adults. Their lives are not regulated by the academic calendar, so an adult education program for these people should be a continuing program, or a "series" of meetings. The words, "tests", "exams", "term papers", or "finals" are all associated with the academic world and are therefore threatening. In an effort to find new words, "chapter" has been used in place of "lessons", "projects" instead of assignments. These are illustrative of other "threatening" terms for which we need to find substitutions. Even some of the suggestions already given leave much to be desired.

When we can produce adult education for our older citizens in the context we have been discussing, more of them will be attracted to such a program and will feel more comfortable under these conditions. While there are those who feel older people should participate in the more traditional adult education programs, we need to consider still another factor that is threatening. Older people are more relaxed. among their peers. They can exchange common problems and concerns, and are not threatened by intellectual competition with younger students. By no means does this imply that dialogue between the generations needs to be eliminated. Quite the contrary, it should be encouraged, but not in the specialized type of adult education with which we are concerned.

Non-threatening education for the older adult has to be more than just a program offering him free tuition. It must involve a deeper and more searching look at the curriculum, the teaching methods, the learning environment, and the interpersonal relationships of the students if we are really to offer a genuine educational program for our older adults.

GUIDE LINES FOR THE ADULT EDUCATOR

Gladys A. Wiggin

Some 40 millions of adults in this country are busying themselves with self or community improvements activities known as adult education. These may be carried on in informal groups or in formal credit or noncredit classes; they are confined to incidental meetings or are expanded into extended and regularly planned programs. They are done with the assistance of lay volunteer or elected leaders, or trained professionals.

Adults are organized for learning on an individual or group basis. The ages of these adults extend from 20 to 90, and their personal circumstances in respect to purposes, economic affluence and past experiences are as varied as their ages. Furthermore, they carry on their adult education activities in a myriad of organizations from highly structured schools and universities, industries and unions, to relatively unstructured local clubs and social gatherings, bull sessions and community get-togethers.

With this relatively amorphous population of adult learners and equally fluid administrative patterns of adult education, can any guide lines be set up for the adult leader regardless of the organizational structure in which he works, the adults with whom he is working, or the nature of his own background? By application of a kind of primitive logic to the American adult and his world, and with the help of some behavioral research, certain principles of action can at least be proposed for criticism.

Purposes, Interests, Needs

1. The *purposes, interests,* and *needs* of the individual adult student must *provide the clue* to content and organization of materials and procedures in the adult education group. This principle is undoubtedly hoary with age and thus is often taken as

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a cliche devoid of meaning. It is, however, becoming increasingly important as we extend in range and depth our information on human behavior, and should periodically be examined in the light of new information.

Human beings are goal-oriented. A biologist has suggested that deeply embedded in their primitive life is an orientation towards survival which over many thousands of years perhaps conditioned the survival of those individuals whose gene structures were altered in the direction of cooperation as a survival mechanism. Whatever this past history and present genetic inheritance, goal orientation towards survival still remains, but is embedded now in a matrix of culturally derived behaviors designed to assure survival modern style.

Thus the adult leader looking at these goal-oriented human beings through the American cultural fabric may see a person needing to get along better on his job, or a mother trying to establish better relationships with her children, or an older adult wanting to while away his time profitably, or a young man looking for academic skills which will help him up the vocational road. Getting at these purposes and needs is difficult even when they are as direct as in the preceding examples.

For the adult leader, the difficulty of spying out the motivations of his group members is compounded by the fact that he and they use language as a chief tool of communication. We human beings are symbolizing animals and probably never more so than when we use words to convey our thoughts and feelings.

"Say what you mean" is an injunction which cannot be taken seriously in an adult's response unless the person listening can interpret the language. Thus the presumably flat statement, "I want to take a course in speech," may be neither flat nor uncomplicated declaration of intent. It may say, "I am not getting promoted as fast as I should be; maybe it's because I don't get along with the bosses. Maybe if I learn to be persuasive, I can improve my standing with the higher ups." Or the lament of a mother that "I love my daughter, but I am so worried about her–she is not getting along in school" may mean, "This child is not going to embark on the career I always wanted and never had, and thus she is not going to be an image of my preferred self."

Thus culturally overlaid drives and emotionally charged symbolizing may complicate the task of the adult leader in getting at the motivations of individuals in his group. And he has not even those meager tools such as case records, tests, and psychological counsel with which teachers of children are ordinarily furnished. He can only feel his way guided by his own expanding store of behavioral information and by a sympathetic ear even to the most seemingly extraneous comments by individuals in his group.

The Preferred Method

2. *Problem-solving* ought to be the preferred method of the adult leader. This principle is derived from the roles of adults rather than from an evaluation of their capabilities. Method should be derived from a knowledge of learning potentials and abilities, and what we know of adults in this respect is disheartening.

We human beings are biological organisms subject to physiological growth and decline. Because we have never been sure what mind is independent of body and because aging psychologists may have a reluctance to examine themselves, we have tried to put as good a face as possible on our intellectual vigor. However, the simple truth of the matter is that most studies show a decline in "mental" abilities commensurate with that in our physiological abilities, and a few investigators insist that the curve of learning declines more sharply than that for motor skills.

The curve of learning shows a high at ages roughly 22 to 25, with a continuing plateau or minor decline to 30, a sharper decline to 50, and a toboggan slide thereafter. When results of tests either of learning or intellectual ability are analyzed into their several parts, these parts show differential decline. Those which measure skills closely related to old learnings and to accumulated experience whow least decline and may as in the case of vocabulary show a continuous rise with age. Those which measure ability to modify old habit patterns or to deal with direct interference with past learnings, are apt to show that the balance is all in favor of the young, often those under 18 years of age.

None of these finding suggest that adults as they age cannot learn, or that they cannot reconstruct experience in fruitful directions, but rather that their period of most fruitful intellectual endeavor is behind them when they have passed the ages of 25 to 30.

Problem-solving is an intellectual ability, and a very important one. Certain aspects of problem-solving play a key role in intelligence tests: as a matter of fact, intelligence is defined as the ability to solve problems quickly and accurately. To be sure, there have been statements to the effect that problem-solving ability increases with age; but studies done in this area have tested the progressive improvement of ability with children and youth ages three or four to 20 to 21. So far there is at least a hint that problem-solving ability declines at the same rate as do other intellectual abilities. This does not deny that in some situations an older adult may not make wiser decisions than a younger, purely because he has a body of experience which stands him in good stead. This is rather different from saying that he has retained or improved his ability to tackle abstract problems quickly and accurately.

Why then stress problem-solving as the method for use with adult groups? First, of course, because adults do not wholly lose their abilities in this direction. They can indeed solve problems and reconstruct experience even if they cannot do so as rapidly or as effectively as they could at younger ages. But more important, problem-solving has a base in the logic of adult life.

Whether for good or ill, adults must continuously solve problems–the most important in their society. Whether they act permissively or authoritatively toward youth, they are still calling the tune for the society in which youth shall live. They must participate in running their own affairs on a local, national, or international basis, or they must make the choice of submitting to authority for such purposes. They were involved day by day and hour by hour in a set of situations which call for judgment. Often they pre-judge rather than judge, to the peril of their relations with other people. Furthermore, they have got in the habit of perceiving of their daily difficulties as problems.

Mrs. Everymother is often unaware of and uninterested in the development of the adolescent; she wishes rather to know what she can do to stop Mary from staying out so late. Mrs. Everyman may be little concerned about the philosophy or science of government, but much exercised about how we can get those crooks out of the courthouse. Thus, in the words of two modern philosophers, each human individual carries on a continuous transaction with his social or physical environment, in the process of which both individual and environment are changed; and the natural method of interacting with that environment is through some incipient kind of problem-solving. It seems more than pertinent, then, to suggest that adult leaders use that method which is normal for most life processes, and that they help the members of their groups to perfect skills in this process.

The End Product: Action

3. The *end product* of the problem-solving activity ought to be *action*. The last step in the problem-solving process, before another problem shall be embarked upon, is acting on the preferred solution. Only by action can the individual secure a feeling of closure. Whether he has made a wise choice or not he is in no position to profit from his choice unless he acts upon it. Although this may sound superfluous and as though it should have been assumed when problem-solving was accepted as a methodology, nevertheless, the principle of action is often honored in the breach by adult education groups and agencies.

Many organizations have in their written or agreed-upon statement of purposes that they are not action groups. Members of these groups feel secure in the belief that they will not be involved in political controversy or subject to censure for having outraged the mores of important members or taxpayers. Part of their difficulty arises from a misassessment of the ebb and flow of inevitable life processes, and part from a misassessment of action programs. Most of all they may be obsessed with the notion that keeping out of trouble is an end in itself, a dubious reading of how constructive change goes forward.

Without attempting to challenge any of the above views, let us return to our friends of a few paragraphs back. While Mrs. Everymother may be perfectly willing to inquire into the nature of adolescence as background for her problem, she still wants to find out what to do with Mary. What she finally does, if she is going to attain closure, may not look like action, but is, in that it is a solution. She may change her way of looking at adolescents and come to feel that perhaps Mary needs more freedom than she had been willing to give her and warrants more confidence than she had been bestowing on her. Or she may find some way of communicating her concern to mary so that young daughter voluntarily curbs her own behavior. In any case, Mrs. Everymother will not easily be satisfied with any less than dealing with Mary's originally disturbing behavior.

Mr. Everyman may not end by bodily throwing the rascals out of the government, but he will want to come to some conclusion satisfactory to himself. He may find on closer inspection that some of the behavior of his representatives is the function of situations which need to be changed; or he may discover orderly processes by which he can assure that a better group of folk get in office. In either case, he has found a solution to a problem and he probably would not be satisfied any other way.

Skirting the Prejudices

4. The *deep-laid prejudices* of adult students probably ought to be *skirted* in the opening sessions of any adult group. This principle may appear to be contradictory to the hoped-for-outcomes of any adult education enterprise. After all, are we not supposed to change these bundles of uninformed superstitions and misleading facts into rational, clear-thinking human beings? But skirting the prejudices seems to be a necessary precaution in terms of what we know about adult students.

All of us have unreasoning prejudices regardless of the degree to which we can change our behavior through informed judgment. Many of these prejudices we have so continuously cherished over the years, that they have gotten stamped into our nervous systems and cannot be gotten out except through emotional blasting. Neither reliable information nor rational methods of argument, so studies show, have proved successful in dislodging them. The frontal attack will serve only to release well-springs of emotion or deepen the prejudices.

Unless the adult leader is also a skilled therapist, therefore, he had better find ways of dealing with prejudice which he can handle. At the outset he had better re-channel or ignore the prejudices and get on to safer topics until he knows the emotional as well as intellectual proportions of his group. When he has his feet on the ground, he can find methodologies suggested by research.

Prejudices have a way of being siphoned off or transformed when people who have prejudices about one another ignore the grievances and work together on common problems. These same people can handle themselves reasonably well also, if they are of approximately the same or similar socio-economic class.

Sociologists and psychologists, as a matter of fact, can suggest many helpful approaches if only the adult leader will heed them. If the latter uses the information so provided, he can contrive situations having optimum conditions of comfort for himself and his adult group members, in the reduction of prejudices and inter-group tensions.

To Extend the Horizon

5. As a final injunction, the horizons of adult students ought always to be *extended* by any adult education experience. This principle is a kind of imperative if we wish to deserve our title of educators. Though the principle itself might be observed incidentally as an outcome of the problem-solving method, it is of enough importance in itself that the adult educator can afford to put it high on the list of outcomes of the educative process.

There are two interrelated phenomena in modern life. One is that to many deeply pressing problems of human existence, there are presently no solutions. This has been put very aptly into a guiding definition of an adult: the mature individual is one who can learn to live in an uncertain universe. The other phenomenom is the one which has come into awareness of the adult public only recently; that the dynamo of our kind of society and even our chances for survival as a people may rest on that unsung group of heroes laboring in the vineyards of pure research. For the American adult who feels himself to be an active participant in the running of his society, it becomes imperative that he understand the relationship between the solutions to his problems and the work of those operating on the frontiers of knowledge.

Every adult is immersed in insoluable problems. His life may be extended by improved research and practice, but he may fall prey to a still unconquered disease, and his life extension is relative, not absolute. He may see an alleviation of the cold war, but it may never entirely disappear in his lifetime and he may have to learn to live with unsatisfactory armed truces, meager victories, and mounting tensions.

He can, and many adults in recent years have been doing so, turn to the church. But some ministers have asked whether these adults have found faith through conviction or are escaping reality. They have been asking whether adults are mature enough to be adults in modern America. The adult leader, whatever the area in which he is operating, ought to feel a moral obligation to help his people to live with themselves through helping them to live with uncertainty.

But adults live with many kinds of uncertainties for which there are solutions; and they worry with supposedly insoluable problems for which there are answers. They constantly enjoy the fruits in their improved circumstances, of the vast volume of work which is already available. Thus Mrs. Everymother is happy that her daughter is protected from polio, and she may credit it to Dr. Salk who so brilliantly picked a serum out of a test tube. But Dr. Salk himself paid tribute to the long lines of researchers who had preceded him and who often for the sake only of feeding their curiosity had developed the theoretical foundations for an understanding of disease and had supplied the pieces which he had put together.

Mr. and Mrs. Everybody enjoy symphonies without thinking about the centuries of study that have gone into developing musical forms; drive cars and run electric gadgets without connecting up their existence with the history of physics since Galileo; take advantage of the work of efficient civil servants without reflecting on the work of political philosophers.

Somehow it seems important that Mr. and Mrs. Everybody do stop to reflect, to look for relationships, to connect generation with consummation. If they do not, they will be in straightened circumstances in the future. For it is axiomatic that our knowledge of ourselves is out of step with our knowledge of the physical universe. Yet it becomes increasingly clear that our management of the universe will depend largely on how we manage ourselves. And this latter task we can pursue with profit only if we see clearly the relationship between pure research in the behavioral sciences and improved practice in human relationships. When adults in democratic societies are willing to budget as much for the study of themselves as for a new weapon, then will their horizons have expanded in accord with their potential as intellectual beings. To assist them in this enterprise is the final charge of the adult educator.

A PROGRAM FOR ADULT NONREADERS

Stanley L. Rosner and Gerald Schatz

AN ERRONEOUS ASSUMPTION underlies programs for adults who can't read or who have limited reading skill-namely that they have never had any previous training. Yet after four to 12 years of schooling, many individuals are still functional nonreaders. The problems that these people present for society and themselves are generally extremely complex. In the Reading Clinic at Temple University we see many adults who required special educational training early in their school careers, but it was not provided for most of them. The demands made on those of us who deal with people with learning problems seem to be increasing.

Obviously, the inability to read creates difficulty in a number of spheres of an individual's life. Economically the nonreader is at an extreme disadvantage. It is difficult to forget the plea of a 20-year-old nonreader who came to the Clinic, bitterly noting that he could not even get into the army. The limited financial resources of these people and their families often prevented them from doing anything about their problem until they were well beyond the ordinary age for reading help. Those who do marry generally are faced at some point with a son or daughter who is better able to handle the basic tools of learning than they have ever been. The inability to read creates strong feelings of inadequacy and anxiety.

On the basis of our experience with a few such adults who had tried many of the group programs of instruction (including television and evening school), we believed it would be worthwhile to attempt small group and individual instruction using the techniques basic to remedial education. Since the funds available were limited, modifications in the diagnostic and teaching procedures ordinarily used were necessitated.

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Evaluation

A testing program which ordinarily evaluates college students and educated adults before they enter an advanced skills course was the one into which many of these individuals came by mistake. After having screened out a number of the "nonreader," a more suitable program of evaluation was devised and the instructional program was initiated. The core of the evaluation consisted of a brief history-taking interview, a vision screening, the verbal section of the Wechsler Adult Intelligence Scale (or where possible the total test), a word recognition measure, and an Informal Reading Inventory (a diagnostic way to evaluate reading in terms of both word recognition and comprehension), a spelling test, a test or two which screened the personality area, and in the cases where it seemed warranted, an associative learning test.

Interviewing helped us to evaluate the type of reading instruction the individual had had in school and in any specialized programs with which he may have had contact. In addition, it enabled us to find out something about the life situation of the individual and to get some initial leads in determining what might have been the etiological factors in the development of the reading disability. The feeling of utter hopelessness which these people seem to generate was best expressed by their constantly asking, "Is there anything that can help me to learn to read?"

Ten adults who were evaluated and who participated in the course typify the population we have dealt with during any given period of time. Their ages ranged from 18 to 42, the average age being 27. Of the ten individuals in the group, eight were married, one was divorced, and one was single. There was only one female. There were seven whites and three Negroes. Three were factory workers; the others had jobs with little responsibility and meager financial renumeration, like assisting an automobile mechanic, janitorial work and general housework.

The intelligence test had to be evaluated from a rather detailed frame of reference since an inability to read can create marked interferences with "functioning" intelligence and we had to be concerned with determining the potential of each individual. We belive that an indication of average potential warranted at least a trial period of instruction in the program. Often this indication of potential was a single subtest score markedly above the others. The I. Q. scores of this group ranged from 82 to 111 with a mean score of 97. A striking aspect in the functioning of these people was the wide scatter of subtest scores.

A comprehensive measure of reading ability provided us with information about the individual's skills. In addition, it pointed out those weaknesses which most needed attention. Weaknesses were frequently found not only in the mechanical aspects of recognizing words, but in understanding, retaining, and organizing material as well. Word recognition scores ranged from a total absence of sight vocabulary to an ability to adequately perceive words at the fourth reader level. Where fourth-level word recognition was found, it was accompanied by serious comprehension needs, which led to this individual being classified in the "adult nonreader" group. Overall reading ability tended for the most part to be far less effective when this was determined by the instructional levels established on the informal reading inventory (95% word recognition and at least 75% understanding). Functioning according to these criteria suggests needs ranging from reading readiness through low fourth reader level. In the latter instance, we were dealing with an individual who could not apply his best skills with any consistency.

In no case was spelling ability above the second level, and half of our sample population of ten could barely handle first level spelling words.

Vision referrals were warranted in six of the ten cases on the basis of inadequacies noted on a *Keystone Telebinocular.* Associative learning difficulty severe enough to indicate neurological impairment was noted in half the cases. The *Gates Associative Battery* test provides a controlled situation similar to the demands of the word learning situation. In diagnostic and class dituations half our population had speech problems severe enough to suggest remedial help. These problems ranged from mild articulation difficulties to severe stuttering. Four of the ten cases showed clear enough personal adjustment problems that referral was made for psychotherapy. We thought that a group counseling program would have been helpful to the whole population, but financial and other practical considerations did not allow this.

In discussing the results of the testing with these people, we pointed out their strengths and weaknesses, being extremely supportive. We provided "financial counseling" so that they could arrange to finance their entrance into the program. This counseling often consisted of helping an individual get tuition for the course from a relative or good friend. Although tuition was minimal, it was still necessary to work out a partial payment plan and in some instances provide scholarship aid. It was also necessary at times to aid students in finding employment so that they could pay their own tuition.

Instructional Program

Effective instruction in reading demands that the reader bring a good bit of skill to the learning situation. In a special program designed for adults with remedial problems, the criteria used were 95% word recognition and at least 75% comprehension. Instruction was initiated at the level where each individual demonstrated this level of functioning. The adult may have developed spelling skills to a far greater extent than his reading, or vice-versa. As a result, instruction in these two areas had to be initiated at two different levels. Even within reading, word recognition and comprehension were widely separated. As stated by one student, "If I can read it, I can understand it." A pattern of instructional needs emerged which was different for each individual.

Instructional Techniques

In General, two fundamental approaches to the teaching of reading–experience and basal–were used in the program. The experience approach utilizes the vocabulary, language and experiences of the individual learner as the material to be read. Stories are developed out of the person's own background of information and current experiences and interests. No attempt is made to control the vocabulary, standardize it, or limit it to certain levels. Topics of personal interest are sure to be the basis of the reading material. Resources such as texts, magazines, or any source of pertinent information may be used to expand the content when necessary. The reading material in the basal approach has a carefully controlled vocabulary. The introduction of new words is paced, the number of repetitions per page is pre-determined, and sentence length increases with the difficulty level of the material. In short, this is an attempt for a formally systematic presentation of reading material. The basal approach has been traditionally used in the teaching of reading from the fundamental levels on up. There are various interminglings of these two approaches.

In this program, basal instruction was provided for the adults at a level where they could function without undue frustration. The structure of the directed reading activity was always utilized. In this activity the student is motivated before the story is introduced. The motivation may take the form of a question or point of discussion. Background information for handling the material is discussed and, if necessary, expanded before reading. A vocabulary-developing step may be coordinated into the motivation phase of the directed reading activity. New or relatively unfamiliar words are introduced to the person in meaningful context. The context of their introduction should not give away the story content, but should serve as an aid to the recognition of the word when it appears in the material. Not all suspected new language needs to be introduced before the actual reading. Some of it may be learned from the context of the reading. In fact, adults rely heavily on contextual clues to unlock words.

The setting of purposes was crucial to instructional aims. The purposes for reading with our group tended to be of two types: general and specific. The general purposes required an inference based on the entire content of the material. A specific purpose may seek the retention or understanding of a single bit of information or series of facts. These were alternated and at times combined to fit skills and the nature of the selection. It is good to have purposes that are not answered in the initial part of the selection, but the selection should always be satisfied if a good job has been done on the reading. Wherever possible, the purposes should be developed by the student, since this leads to the independent use of his skills.

In an adult remedial program, the length of the passage to be read should be limited initially. As instruction progresses, the length of the passages can be increased. This is especially important when dealing with students having specific comprehension difficulty, where the misinterpreting of the material compounds itself if not immediately handled. When later understandings are based on previous misunderstanding, the resulting comprehension becomes very confused.

Silent reading always precedes oral reading since the student should have the opportunity to work out the language and comprehension of the passage on his own before being requested to read aloud. If the nature of the selection and discussion does not warrant it, oral reading may be omitted totally. After each silent reading, comprehension or understanding of the material is checked by questioning and discussion. Questions on the information may require factual or inferential recall. The degree of questioning also varies. Passages are sometimes analyzed in great depth. At other times in an effort not to slow down the process of reading, a few understandings are merely tapped and the reading of the story continued. Vocabulary is also checked to determine whether the new words previously introduced were recognized in context.

At times an oral re-reading of specific passages is done. As with the initial reading, purposes for the oral reading must also be established. Narrative material often lends itself to play-acting or role-taking. The process of motivation, vocabulary development, purpose setting, silent reading, comprehension checks, and possibly silent or oral re-readings is replicated with each new section of a selection as well as with each new selection.

The directed reading approach may also be applied to experience material. A limitless variety of experience materials can be developed with adults. Here we will describe the experience story as used in this program at one stage of development. The ramifications for educational growth are many. The student is asked to develop a story about something he is interested in. Typically, in the beginning, his story concerns himself and might be titled "Who Am I?" or "About Jack." Personalizing the topics helps to establish good rapport and also launches the student into the experience activities. The adult later related stories about himself, his interests, his hobbies and any other areas he considers important.

The stories are initially dictated to the teacher and later written by the student with the teacher's help. This student-centered activity can immediately establish the teacher's interest in who the student is and what his problems are. In the beginning, it sets the adult student at ease and gives him a feeling of success. None of the adults in our program had ever dictated a story to someone else, or for that matter, dictated anything at all. Such persons are passive and submissive. They feel inadequate and insecure. The dominant role provided them in story-writing has more than just educational rewards.

With some individuals, a certain amount of structuring is necessary when applying the activity. In general, we must first drop back to questioning, which elicits a story. Occasionally, questions themselves just provide the context for their own answer. As has been suggested, the development should proceed from dictating to the teacher to writing by the student himself, ultimately with little assistance from the instructor, who may become an interested on-looker. These stories then can be typed and used for many other kinds of activities.

Certainly they are used in a directed reading activity following the same steps and procedures already outlined. The vocabulary and language of these stories can be used in word learning techniques. It is remarkable to note that vocabulary that otherwise would be classed as well above the level of competence for these persons can be readily learned when it comes from the student's own need for expression. In the beginning, no attempt is made to correct grammatical misusage or to change the organization of material. later structural language skills are introduced and developed at a paced rate. The student is never overwhelmed by the number of his mistakes. After a long period of time, early stories are reviewed. At this time the student has developed more skills and spontaneously corrects, develops, or alters the former stories. He often has the pleasant task of wondering how he could have ever written that way. This is one dramatic way of showing the student his progress.

Experience activities are often used in group work. Units on climate, weather, aviation, and job-finding were all developed in small group activities. Initially, brain storming for information from the group is used before any reading is started. The approach does not negate the possibility of using other resource material or other reading materials of whatever level. The teacher often has to rewrite materials, writing them down for the group. However, the level of reading that can be reached when motivation is high is often remarkable. Word recognition problems, which in the group are handled by a variety of approaches, are adapted and altered as their usefulness appears to wear off. Certainly workbooks dealing with phonetic analysis are often most helpful. Teacher-prepared material and some exercises in the area of phonics and structural analysis are also utilized. Occasionally nonsense stories and rhyming exercises are used. These may be created by the student or composed by the teacher.

A specific word learning technique modified from the Fernald Technique and utilizing visual, auditory, kinesthetic, and tactile stimulation is helpful in developing word perception and analysis. Briefly this technique requires the utilization of the four mentioned sense modalities in the learning of words. For persons having extreme difficulty learning through sight and sound, the additions of other modalities has been useful. The technique requires the meticulous tracing of the word as well as seeing and saying the parts of the word as this tracing continues. To have "learned" the word, two successful reproductions of the word by the students must be accomplished. Modifications of the most formal application of this approach to word learning were made because of time restrictions and because it was found that good results could be achieved in a shortened, less demanding use of the technique. In given instances, wives, sisters, and other family members were instructed in this technique and became participants in our program by enabling us to extend learning beyond our limited time in class.

As you may imagine from the detailed nature of the instructional procedures outlined above, it was necessary to have a good many different activities going on at the same time. When one considers a class of ten people, the teacher-pupil was ideally considered to be one to three. This was handled with one overall supervisor of instruction and two people qualified in the basic techniques, although not necessarily experienced with working with adults. Initially, instruction was handled on two evenings a week for approximately two hours each session. The absentee rate necessitated making the instructional period three hours or slightly more one evening per week.

Summary and Tentative Conclusions

The program is continuing, and a student may take as many ten-week units of instruction as needed. The results have been mixed. The problems which create a student's inability to profit from the instruction are frequently those created by his reading problems–financial need, personal adjustment problems, etc. The gains made by many students have led to employment, job advancement, and such things as getting a driver's license (a major victory for one student). We have much to learn, but it seems that the students are developing as we learn. The very real need of making each man an independent functioning member of society appears to be advanced a little with each passing week.

APPENDIX

The following is a list of instructional materials used during the limited time with the group described. It is by no means an exhaustive list of appropriate material for even this group; it is only a sample of what was used.

I. COMMERCIAL MATERIALS

Botel, Morton, *Multi-level Speller* (Chicago, Ill.: Follett Publishing Co.).

Coleman, James C., Frances Berres, Frank Hewett, and William S. Briscoe. *Deep Sea Adventure Series* (San Francisco, California: Harr Wagner Publishing Co., 1959-1962).

Goldberg, Herman R. and Winifred T. Brumber. *The Job Ahead* (Chicago, Ill.: Science Research Associates, 1963).

Halvoiser, Mabel, Mary Meighen, and Marjorie Pratt, *Phonics We Use* (Chicago, Ill.: Lyons and Carnahan).

News For You, Levels A, AA, B (Syracuse, N. Y.: Robert S. Laubach).

Parker, Gordon. *Great Moments in American History* (Chicago, Ill.: Follett Publishing Co.)

Readers Digest Skill Builders (Pleasantville, N. Y.: Readers Digest Services, Inc., Educational Division, 1959-1965).

Road Signs Filmstrips (Cerrito, California: Long Filmslide Service.)

Rochester Occupational Series (Chicago, Ill.: Science Research Associates, 1963-1964).

Tripp, Fern. *Reading For Safety* (Dinuba, California: Fern Tripp, 1962).

Turner, Richard. *On The Telephone* (New York: Bureau of Publications, Teachers College, Columbia University, 1964).

II. OTHER MATERIALS

Since these materials are not readily available and would be too extensive to list, further information on them may be obtained from the authors at the Reading Clinic.

1. Applications and catalogs from various training schools.
2. Experience stories dictated or written by the students, typed and prepared for instructional use.
3. Job application forms secured from employers.
4. Instructional booklets for new employees in local business and industry.
5. Instructor-prepared material individualized for members of the groups.
6. Programmed Basic Number-Fact worksheets.
7. Class prepared auditory and visual discrimination materials.
8. Selected paperback books.
9. Selected bibliographies of books prepared for individual readers.

TEACHING ADULTS TO READ WITH TEACHER-MADE MATERIALS

Frances Lane Harris

IN THE STATE OF WASHINGTON illiteracy is only .9% according to the 1965 NEA Ranking of States, yet there were 12,828 adults who said in the 1960 census that they had less than one year of schooling and 41,014 who had completed one to four years only.

Most of the ones I know seem intelligent and are well dressed, many are employed. Some work as laborers in lumber or plywood mills or other industries, and some work as carpenters, truck drivers, longshoremen, butchers, or welders. But what a feeling of inadequacy they have! A typical comment is, "My son is in the third grade and he can read anything. I must learn to read too." Another, wanting homework so as to learn even faster, said, "I can't start my homework until after 9:00 because that's when my boy goes to bed and I don't want him to know I can't read." One wife said, "I tried to teach my husband to read but he always said his eyes hurt or he was too tired. When he first came to this class his eyes hurt too, but he kept coming to class anyway, and now they don't hurt any more." One spoke of a friend who tried to teach him, "but he didn't go back far enough and he expected me to learn too fast." Another quoted himself as telling his wife, "Teacher doesn't yell at us."

Remarks like these reaffirmed my desire to help these people to learn to read and write. The Economic Opportunity Act has established classes in Basic Adult Education. I happened to be the first teacher to have such a class in our area. Because I had no instructional materials at first, I was forced to construct my own. Later, while using some published materials, students made remarks such as "I liked it better when you wrote those stories." I

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believe that there are some advantages to teacher-made materials and that the readers of the *Journal of Reading* may be interested in some remarks concerning my methods.

My class consisted largely of men who could read and write only their own names, but most of them could form letters and knew the names of most of the letters. Some knew letter sounds and a few words. Others who could "read" were put in another class with a second teacher. My problem was to teach consonant sounds to some, to review with others, to start building a basic vocabulary, but most of all to hold their interest and help them feel that they were learning and could continue to improve.

I started by teaching consonant sounds using several methods but especially one of writing lists of words which the students would supply themselves, listing as many words as they could think of for one initial consonant sound. I usually wrote these words on an overhead projector but a chalkboard was satisfactory too. When we had a dozen or more words beginning with this consonant we read the list orally before going on to another consonant. The words adults suggest are not necessarily the same ones that children would think of in a similar lesson. They did serve the same purposes of focusing auditory and visual attention on initial consonants. Writing the upper and lower case form of the consonant at the top of the list emphasized the letter under consideration. I always wrote the list in manuscript writing, explaining that it looked more like the print in books and that manuscript writing would be useful in filling out any forms, especially those that say "Please print." The process of listing their words gave the flexibility needed in a group with such a range in knowledge. For the beginners, recognizing the consonant sound was the one goal, with little memory of sight words. There was opportunity, however, for any who were ready to remember the total word form to build up a vocabulary. Some found themselves remembering forgotten words.

All this was a necessary preliminary to being ready to read about something interesting. Enthusiasm grows in these adults when they learn something about their own community while they are learning words. My most successful lessons centered on stories I myself wrote for a particular group of students. Yes, it took time, but since the stories were very short it was not as difficult to do as one might think.

My main source of information was the local newspaper. For example, I wrote a series of stories explaining an oil drilling rig which was currently rising on our skyline. Since it was a subject of community curiosity, a newspaper article explained some details of its construction and that it would soon be launched into the Columbia River and floated downstream and thence via the Pacific Ocean to Cook Inlet in Alaska. From this one detailed newspaper account I had basic facts for stories which made a series of lessons for adult beginning readers. These stories had a lot of compelling interest and, in addition, gave these illiterate adults information that they could explain knowledgeably to their families and friends.

For these stories I tried to limit the vocabulary only moderately. However, I typed them in very large type which only allowed about 12 lines to a page, composed short sentences of six to eight words for added ease of attack, and prepared a prereading sheet for word analysis so that before the student tried to read the story he had been guided in vocabulary study. The worksheet also involved him in marking root words, endings, and various other aids toward word analysis. Sometimes I selected words from the story and placed them in columns according to the vowel rules they fit. Sometimes I made columns of a dozen identical words in mixed order, each column a different form such as lower and upper case, manuscript, cursive, or various sizes of type. The student found the corresponding word in each column and drew a connecting line.

Usually I presented much of the word analysis on the overhead projector or chalkboard before the students did the worksheets. Silent reading of the story followed completion of the worksheet. During this reading time I supplied words to those who had difficulty remembering so that more fluid reading would aid in comprehension.

After most students had completed reading the page silently, I found that they felt comfortably reinforced by re-reading it together orally. It must have sounded like an old-fashioned school, but the togetherness seemed to appeal. The shy ones might not join in aloud at first, but their eyes followed the words and eventually they felt confident enough to join in.

This method of using short teacher-made stories had several advantages. There was high interest in the content. Individuals sometimes added special knowledge to supplement the information because it was a local story. It served as a vehicle for structural and phonetic analysis which could fit a wide student range of ability. Since the story was short, all words could be analyzed for the benefit of beginners or for review, but the freshness of the topic and the natural vocabulary provided something new for everyone. Since it was written for an exact group of students, the teacher could more nearly meet their diverse needs than anything in a book could? the teacher was aware of the degree of difficulty in reading level as well as of the appropriateness of the topic in relation to student culture and background.

James T. Olsen, in the October, 1965, *Journal of Reading,* discussed some problems that educational publishers have in preparing instructional materials for the varied needs of the adult market. A teacher preparing her own materials may be able to fit the interests and needs of the class better than a publisher who tried to publish for the average or composite students.

In the March, 1966, *Journal of Reading,* Stanley L. Rosner and Gerald Schatz discussed another way of writing personalized stories by having the student himself dictate the story. They said, "It is remarkable to note that vocabulary that otherwise would be classed well above the level of competence for these persons can be readily learned when it comes from the student's own need for expression." I have found this also true of the short teacher-made stories written on a topic of local interest.

Thus teacher-made stories can serve as a vehicle for vocabulary building as well as phonetic and structural analysis. Perhaps the grestest advantage is interest in the subject matter because it is written to fit the particular class and uses topics of local interest. Our local newspaper has contained information on which to base many stories this past year. Another popular theme was that of local history with stories giving informational background for points of historical interest where families might visit. A brochure available at one of the city museums provided accurate, concise facts needed in writing the series on local history. Other lessons centered around words seen every day. These evoked surprising comments. There was an argument one night about stop lights because a differing lights that read "WAIT" or "DON'T WALK." After a lesson using street names, one man who worked on a garbage truck began noticing street signs. I was surprised to realize how many different highway signs we encounter daily. Some lessons compared the appearance of the words on these signs when they appear in their capitalized forms. The important point is that a teacher can easily find subject matter for simple lessons which will interest beginning adult readers.

I would like to add a thought concerning primary teachers as adult literacy teachers. A primary teacher is familiar with the gradual steps for teaching beginning reading. The sequence of skills for developmental reading is automatic to her. If she is a resourceful person she can easily adapt materials to adults. Teachers used to working with older children probably find it difficult to go "far enough back" and to progress with the very small steps that are needed by adults who are beginning readers.

A primary teacher only needs to keep in mind that these students are adults and should not be treated as children. Perhaps it is best never to mention that she teaches children or to refer to anything she does with her daytime class. I found this surprisingly easy to do. After all, the adults were there before me and their maturity and background of experience were obvious. I was very aware of their sensitivity about their shortcomings and always tried to weigh my words to avoid anything that could possibly hurt any feelings. But this seemed as natural as with any adult whose friendship one values.

Work with adult literacy is a fascinating kind of teaching, for it would seem that all of a teacher's ingenuity and resourcefulness can never be quite enough to teach all kinds of students fast enough. Yet the little cumulative successes bring the kind of emotional regard that make a teacher proud to have persevered.

HOW SOME ADULTS LEARN HOW TO TEACH

Lois E. Hotchkiss

Sometimes it happens that a startling truth jumps out at us almost by accident: we take a look at an old, well-known subject (e. g. adult education) through the prism of a new technique (e. g. programmed teaching) and the murk clears. Problem-solving ideas germinate which were not even incipient just a moment before. An 'instant' cross-fertilization occurs. At such moments growth can come in quantum steps.

Precisely this is taking place now in Los Angeles at the Demonstration School for Adults, a one-of-a-kind experiment in this country. The DSA, now in its second year of funding under Title III, is located in a 40,000-square-foot former supermarket, converted into a laboratory of and for adult education. Its mandate is "to create, develop, and utilize new methods, curricula, and materials to serve adults from all walks of life and motivate efforts toward self-realization...to develop methods, courses, and materials that can be adopted by other adult schools."

The experimental school's program is offered through five "centers" or divisions: Self-Improvement, Career Orientation, Humanities, Family Life and Creative Arts. The Self-Improvement Center includes: (1) a Language Laboratory unique in the teaching of adults in America; and (2) the Guided Study Center which, under Coordinator Louis Van Phelan, is used for experiments in programmed teaching. It is from the latter experience that adult educators can learn problem-solving techniques which may have immediate application for a broad variety of voluntary agencies and institutions offering continuing education.

Significantly, Mr. Van Phelan is not new to the field, having taught adults for the past 10 years. Also of significance is the fact that DSA, although part of the Los Angeles City Schools, is free of reliance upon ADA, a fixed semester timetable, night class

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orientation, and many of the other conditions which public adult school personnel usually live with.

Why does the absence of these restrictions make such an enormous difference in the use of programmed learning for adults? Why can one see new horizons resulting from Van Phelan's work at DSA when they were not that visible before? (Fourteen out of 29 of Los Angeles' Community Adult Schools have similar Centers based on his prototype.)

In addition to the all-important difference of subsidy instead of revenue from average daily attendance, one answer certainly is implementation. The DSA is designed *solely* to innovate and not to do adult education business-as-usual. Rather than renting or borrowing quarters from a day high school, it was facilitated by a grant which provided its own locus, equipment and faculty. Van Phelan's original class, in a conventional public adult school (University Community Adult School) is also free of time clock (semester plan), graded classes (the lockstep of sequential curricula), and academic departmental boundaries. This same pattern has been followed at DSA but under deliberately experimental conditions.

To see how other adult educators could follow this pattern, let us explore why (a) programmed teaching and (b) continuing education are a natural match. Some of Van Phelan's findings are fortuitous for those who seek lifelong learning, some for those who provide it–administrators and teachers, and some for both camps.

Adult Students

1. Adults, even more than children, learn at different rates of speed. This variance in mature enrollees is heightened by the background of each one's life experiences. They are less adept at rote learning because they lack the *tabula rasa* of youth. Also *involvement* in the learning experience is vital for men and women. The lecture method, therefore, is generally inadequate as we have known since Kurt Lewin's studies of a quarter-century ago. [1]

With programmed teaching, the teacher is free to tutor (he may also cluster two or more students with the same problem) while the other adults in the class follow programmed texts at their own speed. Van Phelan created assignments (e.g. (a) write a composition and (b) write a critique of the latter 24 hours later.) He then tapes his comments, bringing students the personal element of his voice--infinitely more meaningful than red-penciled jottings in the margin.

2. Adults often fear taking classes because they dread making mistakes (an inevitable part of the learning experience) especially if their errors are visible or audible.

With programmed teaching, the student is on his own. Only he gets the immediate feedback which signals the need for more work in certain areas. In addition to answering questions, Van Phelan divides his time almost 50-50 between two major kinds of individual attention: availability and reinforcement. Thus he is really saying--"I'm not going to stand over you but I'll help you when you need help" and "–you're doing great!"

3. Adults, unlike children and young people, attend school peripherally; it is not their full time responsibility to be a student. Work and home tasks, financial and personal problems, civic and social obligations plus many unexpected involvements impinge upon their attending classes. Where does this leave an administrator who must plan so-many offerings with a minimum attendance, whether for fee income or ADA? Partly because they are volunteer learners, adults drop out less often due to waning interest than to the built-in priorities on their time–and energy.

With programmed teaching, the student gets credit when he completes a subject (if it happens to be a credit course). He may come to this demonstration School Center, for example, morning, afternoon or evening five days a week. Van Phelan encourages enrollees to study at an advanced level whenever they are ready. no arbitrary norm is set. If their rate of progress is slow or if they have unavoidable absences, no penalty is imposed. (It is important for adult school educators in less permissive institutions to realize that the head count of students actually present during any period always will be less than the daily attendance of the class. As attendance grows, this will level off so that even the most rigidly conforming administrator can relax with the seeming inequity.)

4. Adult students usually cannot enter a class at the moment they get the urge to learn;–they must adjust to the school

calendar. Often this isn't possible because of external pressures (the pluralism of adults' life-roles, again) or for the vital reason of *motivation*. All the literature on continuing education shows that the need--even more, the urge–for learning strikes men and women inconsistently and at different points in their lives. It is the rare adult who feels this need as a constant. If he is told to wait until September or to come back in February, his motivation atrophies and the "moment" may be lost forever.

With programmed teaching and texts, the adult can start learning the instant his need is felt. Making up lost work no longer means spending a specified number of hours in the classroom. Flexibility, that all-important ingredient for the mature learner, has not been squeezed out by a calendric system which was designed originally for children and teenagers.

5. Despite the exhortations of John Gardner, Margaret Mead and a spate of contemporary leaders--both in and outside of the field of education–adults persist in viewing their own learning needs as discontinuous and fragmented. Today they may want leadership training. Yesterday it was parent education. In a few years, if time and circumstances allow, it might be the liberal arts. This pragmatic, catch-as-catch-can approach bedevils adult educators. Yet how can they persuade their potential clientele that education is a continuing process essential to personal growth and the self-actualization of the individual–as well as to his society?

With programmed teaching and texts, they have their first feasible chance. Our culture recognizes terminal points in schooling rather than continual upgrading and expansion. (Vocational and professional training are the only exceptions.) Louis Van Phelan stresses that "it is not so much learning a subject as it is learning *how* to learn–and the Guided Study Center is a natural laboratory for adults who missed this in their formal school experience."

So far it has been pointed out that programmed learning has five basic aspects which make it ideal for adult students: they can (1) set their own pace; (2) obtain feedback from errors privately (3) enroll when motivated; (4) get credit when completing a course--important since most adults are parttime students; and (5) *learn how to learn* so that education becomes truly a continuing process which can be applied to their everyday lives and work.

Implicit in all these advantages is the built-in necessity of the student's self-involvement. Those who, as children, adolescents or as college undergraduates, dutifully sat through lesson periods or lectures without truly participating, find this an electric experience. A further plus is the availability of expert help from skilled teachers in the role of tutors, because only a broadly knowledgeable teacher can function in a programmed learning capacity. This raises a corollary problem, however. Van Phelan finds one of his greatest difficulties is discovering young teachers who will take the necessary (unpaid) time to move out of their respective fields of specialization and become skilled in many subjects.[2] In fact, the recruitment of dedicated teachers imposes certain intrinsic limitations on the growth of DSA's Guided Study Center.

Behind all of Van Phelan's innovations at the Demonstration School for Adults is a two-fold philosophy: (1) every student is treated as an individual according to his needs and (2) the predominant concern is with terminal achievement. "We are not interested in the number of hours a student warms a seat," he emphasizes, "but in what he learns and how he learns, regardless of time."

This sort of learning laboratory attracts four major types of students: (1) those who cannot attend school in the evening; (2) intelligent foreign students who need to set their own pace because English is not their first language; (3) those who dropped out for financial reasons; and (4) other adult dropouts who have become suddenly motivated. In the latter category DSA finds a broad cross-section of all ages and levels of educational attainment. Many had feared that they were "stupid" and so avoided taking classes. Some of the most dedicated clientele in Van Phelan's center includes these persons who, once discovering they *could* learn through programmed instruction, are heady with delight as they exploit their unused competence.

For adult educators interested in similar experiments (especially where it concerns members of disadvantaged minority groups) these findings have particular significance. "The new found confidence," according to Van Phelan, "carries over into the enrollees' everyday work and life and makes them capable of accomplishing tasks they previously would have hesitated to attempt." Not surprisingly, women who 'finished' or left school years ago and have been housebound with domestic responsibilities are well represented among DSA registrants in the Guided Safety Center. The coordinator sympathetically observes, "If a person's world is circumscribed by diapers and dustpans for a sufficient number of years it can be frightening to go back to school-whether you have a B.A. or dropped out in junior high school."

Administrators of adult education programs, whether they are with public schools or volunteer agencies will find that a programmed learning laboratory frees them from the usual enrollment economy. To make available only those programs for which there is a known demand is pointless in the "one-to-one classroom." Administrators, however, should require testing of enrollees before they begin guided study. This further defines the nature of the clientele and the goals sought by each adult when he registers. A broader diversity of programs may be offered without risk capital. In the case of credit students working to complete diploma requirements, the adult learner can finish sooner with programmed instruction–not an unpopular development to announce to the taxpaying public. It is also a valid argument for investing in the modest equipment which a Guided Study Center needs.[3]

Teachers and administrators planning to launch similar centers should investigate the broad range of publishers' programmed texts, Van Phelan strongly urges.

"We have, for example, 12 different English texts available," he explains, "each geared to the specific needs of *individual* students. Five students needing this subject might have five separate, independent problems which call for five different 'teaching tracks' to strengthen individual weaknesses. In spelling there are at least 16 programmed texts available, yet only one which follows a linguistic approach in which the adult truly learns spelling rules rather than relying on rote memory."

A word of warning: not everyone is capable of the self-imposed discipline required by this method. It is only for the more motivated. Van Phelan's experience shows that more than 50 percent of original enrollees "screen themselves out" by the end of the third class. These are the ones who came expecting to be entertained, nursed rather than nurtured, lectured to (retaining the privilege of sleeping) in the misbelief that there is an effortless way to learn. The coordinator holds an in-depth interview with each new student to prepare him for the guided study method. Net results, however, benefit the remaining 50 percent who are willing to accept self-application. This creates a class atmosphere of serious learning and frees the teacher from distractions, permitting him to devote more time and effort to those who are truly ambitious, willing, and able.

FOOTNOTES

[1] Kurt Lewin, *The Relative Effectiveness of a Lecture Method and a Method of Group Discussion for Changing Food Habits* Washington: National Research Council, 1942. Also summarized in T. Newcomb, E. Hartlety and G. Swanson, Eds., *Readings in Social Psychology*, New York, Henry Holt, 1952.

[2] Elsewhere in the Los Angeles community adult schools experiments are being conducted with programmed classrooms which offer only courses in English and mathematics. Certainly it is eaiser to recruit instructors of algebra who also can teach calculus and higher mathematics or to locate teachers of grammar who can give English composition than it is to develop a teaching staff competent to tutor adults in many subject areas.

[3] The equipment for a modest "one-to-one Classroom" for adult students should include:

1. 5 Sony Stereo Tape Recorders.
2. 3 Concord No. 300 Reverse-A-Track Portable Tape Recorders (AC-DC).
3. 3 Concord F-105 Stereo Tape Decks for use of earphones.
4. 1 Craig portable Casette Tape Recorder
5. 3 Filmstrip projectors with 1" lens for close-up projection.
6. 3 Standard Filmstrip Viewers.
7. 1 Olympus Pen Half-Frame 35mm camera for making filmstrip
8. Miscellaneous camera accessories.
9. Micellaneous tape recorder accessories.

SPRINGBOARDS TO EFFECTIVE LEARNING

Dorothy Minkoff

"What shall I use?" is the teacher's inquiry. "What materials shall I order? Where do I go for guidance?" is the cry of the administrator.

These questions are repeated many times across the country by those involved in adult basic education programs. These legitimate questions not only deserve an answer, but must be answered. Since instructional materials are essential teaching tools, the more information available to help in selecting them, the better.

Annotated bibliographies of instructional materials on the market are available from the U. S. Office of Education and from many state departments of education[1].[2] Analyzation of materials used in special projects are, also available in reports[3].[4]

From the virtual flood of "adult" basic education materials now available, judicious selections must be made. The teachers and administrators have the responsibility of choosing materials best suited to the unique needs of the participants in their educational programs. Because a series of books was successful with Job Corps youths of M.D.T.A. trainees is no guarantee they will be successful in any other situation.

Each educational program is unique. Those responsible for each program must ask themselves certain questions before selecting materials:

1. What are the experimental backgrounds of the program participants?
2. What are the specific short and long range objectives of the educational program?
3. What is the background and training of the teachers in the program?

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4. What are the immediate and long range goals of the program participants?
5. How much money is available?

After these questions have been researched as thoroughly as possible, the "team" should go into action. Ideally, the "team" will include the teachers who will actually be using the materials: a basic education curriculum specialist, the person assigned the teacher-training duties, some program participants, and the administrator who will be responsible for the final decision. It is the job of this team to evaluate and choose appropriate materials suited to the unique framework in which the program operates.

There are guidelines that can be used in evaluating the contents, organization and format of instructional materials. These standards are broad in scope as they must be useful to all kinds of adult basic education programs. It is up to the evaluating team to adapt these criteria to their specific situations. There are no hard and fast rules to be followed, but there are a few common sense considerations that should be weighed before materials are purchased.

The subject matter of the instructional materials should be carefully examined to see if it contains the majority of the features listed below.

A. Subject matter should deal with:

1. Adult concerns
2. Current problems
3. Vital and meaningful life styles and situations, i.e., jobs, housing, home and family life
4. Situations that broaden general knowledge with valuable information, i.e., social security, finance, health care, citizenship
5. Constructive human relationships.

It is universally recognized that the ability to read, write and figure is essential to adequately function in today's society. The development of these skills is vital, basic education programs. These skills must be developed as quickly as possible since the adult needs to use what he learns, immediately. This development should be such that every individual is helped to realize his total growth potentialities. The qualities listed below should be carefully considered when evaluating instructional materials.

B. Skills development should:

1. Be sequential
2. Be gradual but compress essentials into the shortest time
3. Be logical
4. Be coordinated (reading, writing, listening, speaking, spelling, arithmetic)
5. Be continually reinformed through reviewing and analyzing previous instruction
6. Develop the individual's ability to use other materials independently
7. Be flexible enough to allow for individual differences in performance (progress at one's own pace)
8. Be so constructed that they contribute to successful learning experiences.

The fundamental format of adult basic education materials is essential and must be noted by those doing the evaluating. In addition to the facts that the materials must be inexpensive, readily available and of good quality–there are questions that must be asked: Do the pages open flat? Is the type large and clear? Does the finish of the paper make reading easier?

Is the material attractive? Generally, the format is not as essential as the content or program of skills development. But the general appearance and organization are contributing factors to how valuable the materials will be to each educational program.

C. The materials should:

1. Include illustrations that are
    a. multi-ethnic
    b. appealing to adults
    c. related to content and help build meaning
2. Provide directions that are clear and easy to follow with a maximum of self-help
3. Provide a teacher's manual which should include
    a. suggestions for enrichment
    b. suggestions for individualization
    c. suggestions for evaluative exercises
4. Be so organized that they can be used in part or whole.

In dealing with the infinite variety of personal factors that are associated with education at all levels, instructional materials are not the only things to be considered. The major factor in any educational program is the teacher. There is a wide variety of satisfactory adult basic education materials. The real need has been and still continues to be well trained teachers who know how to use the best materials for their special situations to the best advantage.

The "right" materials for each unique learning situation is important, but the "right" teacher is trained to use the "right" materials as springboards to effective learning–the results are the full development of the learner's potentialities. Is this not the objective of all education?

FOOTNOTES

[1] Minkoff, Dorothy, Editor–*Adult Basic Education Curriculum Materials,* Adult Education Resource Center, Newark State College, Union, N. J. June, 1967.

[2] Adult Reading Center of the Kalamazoo Library, *A Bibliography of Adult Basic Education Materials.* Adult Education and Community Services Section, Michigan State Department of Education. Lansing, Michigan. 1967.

[3] Barnes and Henderson. *A Review and Appraisal of Adult Literacy Materials and Programs.* Columbus: The Ohio State University Research Foundation, 1965.

[4] Greenleigh Associates. *Field Test and Evaluation of Selected Adult Basic Education Systems.* New York: Greenleigh Associates, 1966.

USING THE TAPE RECORDER IN TEACHING ADULTS TO READ

Judith Wood

COULD THE TASK of being an adult learner of beginning reading be made more interesting? Could a tape recorder be used to aid an adult in his quest for literacy? These questions became the impetus for a project undertaken by the author at an Institute for Teachers of Adult Basic Education in July of 1967. Gathered at Portland State College in Oregon were sixty educators, most of whom were experienced in teaching illiterate adults. It seemed an ideal place to poll the experts.

The author prepared a questionnaire, asking for comments on techniques and results from using the tape recorder in the teaching of reading. Responses indicated that very few of the instructors had used the tape recorder for this express purpose, but those who had done so were enthusiastic about the results. A compilation of their ideas is given below, divided for convenience into general categories.

To Teach Beginning Reading:

1. Tell a story on the tape. Have the student draw a picture which illustrates the main theme of the story. This successful primary activity is also helpful with illiterate adults who perhaps can express themselves no other way.
2. Tape some familiar songs. Print a songsheet to accompany the tape. After a few sessions with a familiar song many of the words on the songsheet will become sight words. This is most effective if the student is allowed to sing along with the tape.

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3. For the teaching of beginning reading the teacher chooses a short, meaningful selection and reads it at normal speed onto the tape. Each student should be provided with a set of earphones and a printed form of the selection. The student follows the printed page while the teacher reads. It is quite important to read at a normal speed and not slow down excessively. The entire selection should be read through once. At the beginning of each page, it is wise to say, "Look at page four." Insert "Turn the page" at the appropriate times. After reading through once, tell the student that you are going to do it once again, and this time he will read immediately after you. You read one sentence, then pause for a long enough period of time for him to repeat the sentence. Read the next sentence and continue in the same manner. After the entire selection has been gone over for the last time, it is well to work with the students, using the same type of questions used to reinforce any other method of teaching reading. It is best to do this in person so that you are sure to know what the student is, or is not, learning. This method of teaching reading may be used by itself until the student has enough sight vocabulary to move to more structured word analysis techniques.

To Improve Phonetic Ability:

1. Make a tape of beginning sounds. Give complete drill for the sounds on the tape, allowing time for student to participate by repeating what has been said. Make worksheets to go along with the tape, thus giving the student the added advantage of visual reinforcement.
2. Prepare "phonics reinforcers," for example, a kit of items for each student. In each kit will be something to handle, the name of which involves one of the phonetic sounds with which they are working. For adult men the items could be tools; for women, homemaking items. The tape directs the students in the use of the kit.

To Improve Oral Reading:

1. A selection, perhaps one written primarily as an exercise in

English as a second language, is taped by the instructor. The same selection in print is given to the student. He reads aloud along with the tape, gaining both audio and visual reinforcement.

2. Direct oral reading with the tape, stressing diction, intonation, emphasis and rhythm.

To Improve Comprehension:

1. The teacher reads a sentence or phrase onto a tape, repeating it three times. The students, seated in booths with head sets on, write down as closely as they are able what they have hears. When the entire lesson is finished the correct copy is shown, either on a printed sheet or on the overhead projector. The students correct their own copy from this.
2. Use the tape recorder for pattern practice to emphasize continuity. Repeat two sentences on the tape. Have the same two written on a work sheet. Let the student combine these into one sentence. For instance, "I know a man. I saw him downtown." becomes "I saw a man I know downtown." The teacher should pause after the two sentences, or allow the student to turn off the recorder whild he writes the combined form on the worksheet.

To Improve Motivation:

1. Students can make up their own stories and tell them on tape. The teacher has them typed from the tape so that the student can read his own work. This is a great morale booster for adults, who have perhaps never seen their own efforts in print.
2. Students can read from a prepared script onto a tape which will be synchronized with a slide presentation. The thrill of producing something for public consumption is great motivation for those who have not been school achievers.

For Diagnosis and Evaluation:

1. Student reads a selection onto tape. The teacher later plays the tape back to the student, who notes his own errors.
2. Record individual progress with tape. Each student receives a

roll of tape when the term begins and at intervals records the reading of newly introduced material. Listening to the successive recordings provides encouragement to those who feel that they are not making progress, or it becomes a spur to those who are lagging.

3. Students read dramatic presentations and speeches onto tape and listen to the playback for self-evaluation.
4. Show a three-minute single-concept film (no sound). Have students dictate narration onto tape. Later, make a transcript of these narrations. Then a group of students can read and compare the different versions as they view film again.

As a Supplemental Aid:

1. In using programed materials with the weak reader, the teacher may record whatever must be read. Then the poorest student can follow the print, assured of comprehension.
2. When a teacher knows that he will be absent the following session, he can pre-record any necessary parts of the reading lesson. The substitute teacher can play the tapes and keep a certain continuity in the reading program.
3. A teacher can pre-record stories and lessons when time is available and use them when pressed for time. Teachers aides or capable students can help record lessons to be used at a later date.
4. The tape can give directions for worksheets used as comprehensive checks following silent reading and discussion of a selection.

From all of the instructors interviewed by the author came praise for the recorder as a teacher-stretcher, as an individual tutor, and as a machine which can be closely adapted to individual needs, yet free the teacher for other tasks. Add to these advantages the fact that illiterate adults usually like to use the tape recorder, and you have a reading aid of exceptional value.

PART VII

EVALUATION

To Grade or Not to Grade?
REPORT CARDS FOR ADULTS?
Ernest E. McMahon

One of the myths of adult education is that adults do not want grades for courses they take nor do they want examinations. The arguments have been developed to the effect that adults study for the sheer love of learning and that grades are only a senseless carry-over of unpleasant memory from earlier days of formal schooling.

However, there are differences of opinion and philosophy within the ranks of adult education just as there appear to be such differences within the ranks of political parties today. A traditionally inclined faction (at an earlier date termed conservative) doubts that grades and examinations are useless and, also, doubts that adults feel about them as the myth alleges.

Comments made by adult students from time to time have, indeed, supported the notion that adult students wanted examinations and supported the notion that adult students wanted examinations and grades, and wanted them for very valid reasons. It was concluded that one way to find out was to ask adult students, and, consequently, the adults enrolled in non-credit university evening courses in two cities were asked their opinion. The fact that the courses were non-credit and that degrees were not involved is emphasized.

For 1,896 such students at least, the answers shattered the myth. Among those people, two-thirds of them, 1,256, desired both grades and examinations; 189 wanted grades but no examination; 88, an examination but no course grade; and only 363 wanted neither.

The striking fact is not the one-sided majority, which conceivably might be ascribed to habit or indoctrination in

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elementary and secondary school, but, rather, the range of reasons.

Incentive or Appraisal

Instead of being depressed by having to receive a grade, many students expressed the opinion that anticipation of receipt of a final grade was an incentive without which the student would not work as hard nor accomplish as much. Many others looked upon the grade positively as a helpful evaluation of progress rather than as a punitive measure. Further, there were several who wanted to find out whether the instructor's rating agreed with the student's own evaluation of his work. Other recurring reasons included personal satisfaction and guidance for future study.

One student stated the motivation case as follows, "I think it sets a goal for us to achieve if we have a grade to work for," while another said, "Educators should know by now that the human being is inherently lazy and only works when he has to."

Evaluation was supported by such statements as, "Out of curiosity as to whether or not I have learned what was expected," and "Feel this is necessary in order to know whether subject being studied is being learned. Do not feel qualified to determine this myself."

Comparative evaluation was stated as, "To see if the teacher places the same value on the knowledge I think I have received," and "It helps the student realize, to some degree, his achievement as judged by a second party-the professor."

The guidance implication cropped out in statements like, "To serve as a guide as to whether additional studies may be advisable," and "To find out if I should go on to the next course or take this one over."

Miscellaneous replies included the following:

> To see how I fare in a competitive situation.
>
> To show my boss, and to prove I'm ready to go out on the road selling.
>
> Company will provide tuition refund.

Tuition Refunds

The fact that employers bear a significant share of the cost of evening study and generally require grades as evidence of accomplishment or diligence does not appear to have too much of an effect on the desire for grades. There were 273 students who said they needed grades for company refunds of tuition, but only 115-less than half-gave the reimbursement as the only reason for wanting a grade. There were 158 who gave additional reasons such as self-satisfaction or evaluation of achievement.

Interestingly, of the 115 who sought the grade solely because of necessity, only 42 wanted no examination.

Examination and Learning

If the myth has real substance, it might be expected to appear in connection with examinations but two-thirds of the students asked for both grades and tests. As indicated above, there were 189 who wanted grades without examination, and they were partially offset by 88 who wanted examinations but no grade. Here, as with grades, the reasons as well as the numbers appear to provide refutation of the myth.

Examinations were supported as a learning device rather than as instruments of torture. Even among those who commented on the pressure of an examination there was positive side were the necessity of organizing material for presentation in the examination and the opportunity to verify what is considered important in the course. The examination was also defended as a check for the instructor.

The value of the examination as an aid to learning emerged in statements such as, "Examination should bring out most important phases of course, and if not known at exam time, at least one will be able to study them later," and "To make me think-to help me crystalize ideas-to find out how much I don't know." Other strong statements in support of the examination included, "As much can be learned for an examination both in a positive and a negative aspect as is learned during lectures and home study," and "The easiest method of determining whether or not I have understood the material presented is through the use of a written exam. Only when you can express your thoughts on a given subject will you fully understand it. Again, conveyance of your thoughts to another can denote understanding of the subject. If your instructor can understand your thoughts (through grading of an exam), you, as the student, can feel that you understand the subject."

Pressure was recognized in the statement, "Nerve-racking but necessary toward an honest appraisal by the professor of my knowledge of the course."

A practical point of view was reflected by those students who thought the examination might be useful to the instructor. One commented, "So the teacher can see what parts of the course the largest percentage of the class fail to understand and can put more stress on those points in the future." Another said, "I would like to see how much the instructor feels he has covered," and still another wrote, "To see if the teacher places the same value as I do on the knowledge I think I have received."

The Other Side

About twenty per cent of the students wanted neither grade nor examination, and some of them stated their cases well. They tended to discount the grade as an incentive and several pointed to the record- keeping uselessness of a grade since credit toward a degree was not involved.

As one student wrote, "I am more interested in the information obtained. A grade is like a reward. There is no standard of grading and what would be an excellent grade with one instructor would only rate fair with another. Too often students study for the grade rather than accomplishment."

Two others declared, "It is meaningless and not an incentive to study. If I want to learn, I will study, and receiving a grade for the course will not alter my feelings," and "I won't know any more about the subject with a grade or without a grade. My motivation is to learn, and the work I do will not be affected whether I receive a grade or not."

The uselessness of a grade was reflected in the statement, "Having received a Ph.D. in Chemistry from —— University, I can't see any purpose for obtaining a grade in this course." Another student said, "I'm taking the course as recreation from employed and volunteer responsibilities,"which implied agreement with another opinion that, "I am taking the course for my own pleasure and working for a good grade might spoil it for me."

Practical objections to grades appeared in the following: "Receiving a low grade might discourage my company's interest in me," and "I don't have the time to study enough."

No Examination, Either

A major reason for not wanting to take an examination, in addition to lack on interest in receiving a grade, was the fact that a class session devoted to an examination would eliminate a lecture or additional discussion which some students felt would be more productive as a learning experience than a test would be. There was, also, a substantial amount of comment about pressure and nervousness.

Some of the statements were pretty strong, such as the following:

> Examinations are a waste of valuable time in which more could be taught. They prove nothing except that the student can take an exam without getting nervous and making simple mistakes.
>
> If a grade is based on exam, I don't want to waste a night taking the exam. I'd rather listen to a lecture. A grade for class participation seems unfair. Some students are familiar with subject- many are not. Also, I'd like to use study time for what I want to know- not what I think may be on an exam.

The psychological problem of examinations was indicated by students who asserted, "The pressure of exams takes away the joy of learning," and "Exams make me extremely nervous and I seem to forget the answers due to my nervousness." One student said, "I'm self-employed and will retain that part of subject which I am particularly interested in to help me in my own business," and another stated, "I don't want to know how bad I was."

Competition, not Evaluation

Throughout the replies, regardless of position taken, recurred the expression that a grade was a competitive yardstick rather than an evaluation. It was a device to indicate who was better or worse than someone else rather than an indicator of where a subject had been mastered and where reinforcement was needed. Such an attitude may be taken to indicate that our culture emphasizes competition; it also may be taken to indicate that our teachers fail to use grades effectively in the educational process.

In fairness to the supporters of the myth it must be admitted that 51 of the students, in addition to those under company refund plans, had to receive grades because they were enrolled in certificate programs, short curricula for which a certificate is awarded upon successful completion of all the courses in the program. However, like the tuition refund group, many of the certificate students expressed a personal wish for grades for reasons such as those set forth earlier.

There were, also, 82 students who sought grades to meet or establish a qualification or criterion of their own choice such as to prepare for a professional examination, or to qualify for a better job, or to impress an admissions office. Some of those who had job qualifications in mind wanted the grades specifically for reference in support of a new application; others wanted to use them in present employment.

It must be pointed out, too, that the questionnaire was distributed among adult students enrolled in a program which consists of organized classes and not of discussion groups. It may be argued that in such adult education programs as discussion groups and community action projects there is no place for a grade, and the argument probably is valid for such cases. Unfortunately, the myth, which may have had its origin in discussion groups and community projects, has grown to encompass adult education as a whole.

In refutation of the myth, almost two thousand adults, a cross- section of the population in an urban area, indicated an overwhelming preference for grades in non-credit adult courses.

PART VIII

MATERIALS

MATERIALS, METHODS, AND PROGRAMS FOR LITERACY EDUCATION

Robert F. Barnes

Research in adult literacy education is moving slowly through its initial stage of development. The research reviewed in this chapter represents the bulk of the research conducted and reported in this field. For the most part, the research conducted thus far has been done by persons directly involved with adult literacy education; very little has been conducted by persons from disciplines related to education.

Materials

Developmental

Publishers Weekly (1964) reported the findings of a U. S. Office of Education task force in a review and appraisal of existing instructional materials for adult literacy education. The task force found "a serious shortage of materials for teaching basic reading skills, especially word recognition skills." Most materials stressed a suggested basic vocabulary instead of recognizing the vocabulary already possessed by adults. The materials were not aimed toward the sophistication and interests of the intended reader, nor were they written on a functional level to aid in teaching the skills of practical grammar, letter writing, and good speech.

Kempfer (1950) surveyed 56 librarians and evening school principals in the United States, asking them, "At what grade levels of readability is there the greatest shortage of suitable reading materials for adults?" The upper elementary levels were mentioned most frequently. These librarians and principals felt that the areas of citizenship, homemaking, and family life ad parent education exhibited the most acute needs. The validity of these results, which are somewhat out of date, depends a great

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deal upon how closely the librarians and principals worked with adults of low reading ability.

Dale and Tyler (1934) tried to discover the factors influencing the difficulty of reading materials. They used samples of personal health materials with groups of adults who had low reading ability. The number of different technical words in a selection was found to be the factor most closely associated with difficulty of comprehension. Next in line was the number of nontechnical words in the selection unknown by 19 percent of sixth grade pupils.

Field Testing

To test the basic fundamentals of reading and spelling, Levi (1964) used 204 subjects from Chicago, 128 of whom were adults with an average schooling of 5.8 years. After 99 hours of prescribed instruction, the mean difference between pretest and posttest scores of these adults was 4.6, with a standard deviation of 0.65. These figures must be interpreted cautiously, however, since it is not exactly clear what this gain represents. Two of the tests used had norms based on elementary school populations, and no effort was made to utilize a control group.

A more structured experiment was conducted by Henny (1964b), who used the Family Phonics System with 30 inmates of a penal institution. These subjects were divided into three groups: a control group, an experimental group that received one-to-one tutorial instruction, and an experimental group that received group instruction. He found that 20 one-hour sessions increased reading ability by as much as 2.5 grade levels for the sessions increased reading ability by as much as 2.5 grade levels for the functionally illiterate inmates and that it made little difference whether the teaching- learning situation was on a group or on a one-to-one basis.

Another experiment conducted in a reformatory was directed by Allen (1961). The Laubach literacy films were used for instruction of 288 inmates, 108 of whom graduated from the program. The showing of the films required 49 hours, and extra sessions were used for classroom instruction, review. practice, and drill. The subjects has a claimed median educational experience of

5.8 years but a mean measured eductional achievement score of 1.97. Those completing the course increased an average of 2.5 grades in reading, vocabulary, and spelling. The results must be viewed with caution since the sampling technique used was unidentified, no control group was used for comparison, and the test instruments had norms based on school children. Also, the results from the two previous field test efforts cannot be generalized because of the confined population.

Henney (1964a) again tested the Family Phonics System and apparently did not limit it this time to a penal institution setting. The improvement in scores ranged from 3.5 to 7.4 grade levels after 160 hours of instruction, and he reported a significant difference between the gains in reading ability of the members of the experimental groups and the gains of the control group. The results of this field test can be questioned because of the following limitations: the test instruments, the lack of a description of the control group, the apparent absence of any attempt to select a random sample, and the apparent absence of any effort to match the experimental and control groups.

Additional References. Cass (1960); Moore and Hendrick(1958); Neijs (1961); Ward and Brice (1961).

Methods

The interim report of the Norfolk experiment directed by Cooper (1964) relates the use of team teaching with four closely matched groups of "hard- core unemployed," the majority of whom did not pass the *General Apitude Test Battery.* The main experimental group was given intensive instruction both in general education and in technical training; the subsidiary experimental group received only technical training. The main control group was tested only at the beginning and end of the project, while the subsidiary control group received guidance and occupational information on a bi-monthly basis to test the Hawthorne effect. The intermediate results reported by Brooks (1964) showed that 90 of the 100 men in the two experimental groups graduated, and all of the graduates were placed on jobs, most in their respective fields.

Peerson (1961) directed an experiment that involved televised instruction of illiterates with Laubach's *Streamlined English* and supplementary materials. Classes utilizing direct teaching were organized for those areas having poor television reception. One-fifth of tgroup of 608 subjects had a minimum of five years of schooling, and one-fifth had had no previous schooling, so the typical grade level was two or three years. After approximately 98 hours of televised instruction and review sessions, the groups were given a standardized test to compare these adults with a national norm of school children. On most levels adults' results compared with children's results about half way through the second grade. The data suggested that "television teaching is less effective than the person-to-person procedure in developing the skills of connected reading." Using these same televised lessons with Laubach materials, Holst (1959) reported the results of tests given to 61 enrollees. The total group was composed of interested home viewers and students enrolled in 31 Memphis centers. The average grade level achievement scores were at the 2.5 grade level or above, with the total average achievement at 2.8. However, no pretest scores were used, and a description of the sample was not given. The programming method was tried with adult illiterates by Crohn (1964). Intermediate data indicated a need for further training in visual discrimination and an increase in the use of context as stimuli support.

As a result of a 1955 survey of 30 programs, Cass (1956) identified some common problems of administrators, successful methods and techniques, training and recruitment practices, and a general overview of the structural organization of basic adult education programs.

Additional References Hilliard (1963); Olson (1963).

Service and Agency Studies

Since very little knowledge had accumulated on the actual performance of the uneducated group of inductees during World War II, Ginzberg and Bray (1953) chose a representative sample of 400 from the 303,000 illiterates received by the Army for training in basic literacy subjects. The typical trainee came from a community of under 5,000 persons, had completed more than four years of schooling, was single and self-supporting, and gave no evidence of having ever broken the law. Of the 400 selected, 343 graduated from this basic program. The evaluating criteria emphasized length of service, type of discharge, amount of time lost for medical and disciplinary reasons, and time of discharge (before or at the normal termination of his period of service). Of 331 graduates, 38 percent were rated good or very good in performance, 49 percent performed acceptably, and only 13 percent were considered a loss to the Army. In addition, about 50 percent of these graduates applied to the Veterans Administration for educational benefits after leaving the service.

Altus (1950) was interested in the relationship between vocabulary and literacy when intelligency is constant. He administered several tests to 156 illiterate soldiers whose mean IQ for all eight reading levels was 77, ranging from 75-79. He found that literacy and vocabulary were somewhat related, "through the effect of one upon the other appears to operate in rather narrow limits."

Brooks (1963) directed a study to determine the literacy level of people receiving public aid even though physically able to work. The sample consisted of 680 adults on relief, more of whom were Negro women from broken homes with a median grade completion of 9.5 years. Only 6.6 percent had not completed five years of schooling. However, when a standardized test was administered to each and the scores were compiled, 50.7 percent of the total scored below or at the functionally literate level (fifth grade reading ability).

Additional Reference: Altus (1950); DeGabriele (1961); Hertert (1963).

Conclusions

From the lack of basic and applied research in adult literacy education, and from the tremendous emphasis now being placed upon this aspect of education, it is apparent that without a great deal of further sound research this field will continue to be little more than the present conglomeration of hit-or-miss programs.

Well-designed research is badly needed in such related areas as sociology and anthropology so that teachers and administrators in the field may better understand the illiterate adult, his environment, and his society. Research is needed, too, in areas such as learning, motivation, teaching methods and techniques, and teacher training techniques.

The reviews of field testing that have been completed and reported point up a need for a sound design strategy for future field testing of instructional materials. Instructional materials must be developed to meet the needs of the adult illiterate. Finally, it appears that there is a real need to identify accurately the functionally illiterate segment of the population.

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INSTRUCTION MATERIALS
FOR FUNCTIONALLY ILLITERATE ADULTS

James Olsen

I

The "adult market" is actually many different kinds of markets. This market consist of the unemployed, the high school dropout, the rural and urban poor and the worker displaced by automation. According to Seymour Wolfbein of the U. S. Department of Labor, this market is also a teenage market because teenagers represent the largest numerical group in this population. (In the 1960-70 decade, for example, there will be seven and a half million teenage dropouts and one-third of these will not even have a grammar school education.) At the same time, this market includes more than 2,000,000 adults for forty-five years of age who do not have the necessary academic skills to get and to keep a job.

To meet the variegated needs of these disadvantaged, educators have usually made up their own local ad hoc programs which have been tailored to fit the needs of a particular group of dropouts, non-English speaking immigrants, jobless workers, or the like. The immense diversity of these programs, the lack of a formal institutional structure like a public school, and the fragmented nature of the "adult market," have discouraged educational publishers from investing significant sums of money in instructional materials for adults. Basic questions like who these adults are, how they are organized for instructional purposes and who teaches them have remained largely unanswered.

Moreover, the 33,600,000 different adult education courses being given throughout the country, the age range of the "adults" taking these courses (15-65 or more), the methods of study (ranging from formal courses and correspondence courses to

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on-the-job training), the different places of study (ranging from church basements and community centers to industry and the armed forces), have frightened off the publisher with the result that there has been a severe lack of materials for adults.

Indeed the concept of literacy itself has eluded definition. What consitutes literacy? Some define literacy as the ability to read at a sixth grade level. Others define literacy in terms of "employability" which demands a high school education. It is not surprising then that there is disagreement over the number of adult functional illiterates in the United States. The U. S. Office of Education has put the figure at 11,000,000. Other sources put the figure at 40,000,000.

Whatever the figure, this much can be said with assurance:

1. 23,000,000 adult Americans do not have a grammar school education.

2. 55,000,000 adult Americans do not have a high school education.

3. One out of five high school graduates is not accepted by the Armed Services because he is unable to pass the academic qualifying tests.

If we use the 1960 census definition of functional litteracy (less than five years of schooling), there are more than 8,000,000 Americans (one out of every twelve Americans aged 25 or more in this category. But the problem of employability is not limited to those with fewer than five years of schooling.

II

While the great diversification in this field presents a major problem for those interested in the construction of adult instructional materials, certain central characteristics of this adult group do emerge:

1. They lack a sound foundation of basic academic skills and are generally either non-readers or poor readers.
2. Many are apathetic and lack learning readiness.
3. They often know little of the world of work.
4. They have negative attitudes toward authority.
5. Sociologically, many are migrants, immigrants, and members of minority groups.

After surveying more than 500 different kinds of commercially produced materials, the U. S. Office of Education task force team indicates *Report of the Task Force on Adult Basic Education Instructional Materials and Related Media* that not only are the above five factors not present in the available adult materials, but these added deficiencies are present:

1. The reading level is too high by as much as three to four years.
2. The general approach, "tone," and subject matter is too juvenile.
3. The language skills and basic word attack skills that functionally illiterate adults need are not taught.
4. The content is too formal and pedantic.
5. There is little integration of reading, writing, and arithmetic skills with other subject matter in a functional context.

Of course the experience of the Army and Navy during World War II bears these criticisms out. As early as that time the Armed Services found that both the adult and conventional high school materials were completely inappropriate for their adult groups.

III

It is apparent then that we need new literacy materials. It would seem that publishers can overcome some of the difficulties and problems of the adult market by packaging their materials flexibly. These materials should be organized so that they can be used in part or whole. They should be priced reasonably and they should be in soft cover or paperback form but designed for hard use. One-shot publications, an individual book or filmstrip, will probably not be either educationally sound or commercially profitable. Rather packages or systems of instructional materials will be needed.

What should the editorial content of these materials be? The new adult materials should place emphasis on reading, language arts and number skills. Newer techniques will teaching machines can also be used. The central emphasis will be upon learning to read, write and handle mathematics in meaningful situations like those encountered on-the-job. Completing job order forms, filling out applications, writing out bills, and so on, should be included.

There is a special need for job-oriented books at lower grade reading levels. Manuals on how to become an electrician's helper, an apprentice in a trade; booklets about tools and about child care are also needed. These reading materials will use and illustrate concepts that are on an adult level including job experiences, family conflicts, personal problems and community frictions. Content and illustrations should also reflect minority groups.

In all cases, these materials should involve the adult immediately. Some adults will be so alienated that printed materials will simply not reach them. For them, sound films, tapes, film strips, teaching programs and manual activities may have to either take the place of, or set the stage for the reading materials that will come later. Tone and approach should be mature, direct, practical and concrete. A realistic, but not necessarily depressing, picture of life among economically disadvantaged groups should be given.

The pattern of speech used must not necessarily be the formal subject- verb-object pattern but can more closely follow colloquial speech. Sentences should be short; syntax simple. The question, the expletive, dialogue-all have a place. The style should be simple, dramatic, pithy and at times aphoristic. A wide variety of illustrations should be used but they should be closely tied to the text and help to explicate the text.

In the teaching of reading, a sentence rather than a word approach should be used because even adults without sufficient word-attack skills have already internalized the word order of our language. Beginning with a letter or word approach makes adults feel like children and therefore antagonizes them. After some sentences have been learned, word attack skills can then be taught in terms of the words already known. These skills can then be further developed and extended with other kinds of varied exercises. All new learning should be quickly rewarded and reinforced. (We can expect the extensive and intensive use of programmed materials both because of this and the lack of trained teachers).

IV

Publishers still face many problems in this area. Even the basic problem of the size and location of the adult markets remains unanswered. The size of printings, methods of distribution, prices and profit margins will have to be faced at some point.

But while these markets pose a problem they also offer promise. The very definiteness of the school market, as Janovitch has pointed out, has discouraged experiment and innovation in educational publishing. Publishers have generally offered materials to the schools that fit the school's curricula and patterns of organization. If a book, for example, has been too "far out," in the sense that it does not meet the "normal" expectations of our public schools, it has not been bought. The publisher then cannot pay his costs from his sales. This threat of economic loss acts as a powerful deterrent to experimentation in materials. Thus educational innovation has become circumscribed by the institutions served.

As yet, the adult market is "wide open." To meet the complex challenges of this market, publishers will have to generate a broad succession on neideas. These ideas may take many forms. As these forms emerge, we can expect that many of the traditions of formal educational settings, new kinds of instructional groupings, different teaching technologies and styles, will need to be tried out. Indeed, audio-visual media may finally come into their own in the education of the socially disadvantaged adult.

V

Educational materials are now looked upon by our government as major weapons in the war on poverty. Those people without a broad base of academic skills upon which vocational training must be based cannot economically survive in an increasingly specialized, automated and shifting economy. Children now in school for example, can expect to work in as many as three different jobs in their lifetimes. Employers demand higher and higher levels of academic competence both because of our increasingly complex technology and because we are producing more people than jobs. Without academic and job skills, the disadvantaged adult is doomed to poverty and social isolation.

As federal funds from the Economic Opportunities Act, the

Manpower Development Training Act, the Vocational Education Act and the Adult Education Act reach state and local agencies, the nature, size and location of the adult markets will be more precisely defined and a kind of profile will gradually develop. At the same time, publishers will quickly seek ways to meet the new challenges of a rapidly developing mass market. This sense of urgency, born of opportunity, will contribute to education and the national welfare.

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